



UK COMMISSION FOR
EMPLOYMENT AND SKILLS

Creative Media and Entertainment: Sector Skills Assessment 2012

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Sector Skills Assessment: Creative Media and Entertainment

Authors

Creative Skillset and Creative & Cultural Skills

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Views expressed in this Evidence Report are not necessarily those of the UK Commission for Employment and Skills.

Foreword

The UK Commission for Employment and Skills is a social partnership, led by Commissioners from large and small employers, trade unions and the voluntary sector. Our ambition is to transform the UK's approach to investing in the skills of people as an intrinsic part of securing jobs and growth. Our strategic objectives are to:

- Maximise the **impact** of employment and skills policies and employer behaviour to support jobs and growth and secure an internationally competitive skills base;
- Work with businesses to develop the best market solutions which leverage greater **investment** in skills;
- Provide outstanding labour market **intelligence** which helps businesses and people make the best choices for them.

The third objective, relating to intelligence, reflects an increasing outward focus to the UK Commission's research activities, as it seeks to facilitate a better informed labour market, in which decisions about careers and skills are based on sound and accessible evidence. Related, impartial research evidence is used to underpin compelling messages that promote a call to action to increase employers' investment in the skills of their people.

Intelligence is also integral to the two other strategic objectives. In seeking to lever greater investment in skills, the intelligence function serves to identify opportunities where our investments can bring the greatest leverage and economic return. The UK Commission's third strategic objective, to maximise the impact of policy and employer behaviour to achieve an internationally competitive skills base, is supported by the development of an evidence base on best practice: "what works?" in a policy context.

Our research programme provides a robust evidence base for our insights and actions, drawing on good practice and the most innovative thinking. The research programme is underpinned by a number of core principles including the importance of: ensuring '**relevance**' to our most pressing strategic priorities; '**salience**' and effectively translating and sharing the key insights we find; **international benchmarking** and drawing insights from good practice abroad; **high quality** analysis which is leading edge, robust and action orientated; being **responsive** to immediate needs as well as taking a longer term perspective. We also work closely with key partners to ensure a **co-ordinated** approach to research.

Sector Skills Assessments (SSAs) are key sources of authoritative and focused sectoral labour market intelligence (LMI), designed to inform the development of skills policy across the UK. They combine “top-down” analysis of official data with bottom-up intelligence to provide a consistent, comparable and rich understanding of the skills priorities within different sectors of the economy, across the four UK nations.

Sharing the findings of our research and engaging with our audience is important to further develop the evidence on which we base our work. Evidence Reports and Briefing Papers are our chief means of reporting our detailed analytical work. All of our outputs can be accessed on the UK Commission’s website at www.ukces.org.uk

But these outputs are only the beginning of the process and we are engaged in other mechanisms to share our findings, debate the issues they raise and extend their reach and impact. These mechanisms include our *Changing Behaviour in Skills Investment* seminar series and the use of a range of online media to communicate key research results.

We hope you find this report useful and informative. If you would like to provide any feedback or comments, or have any queries please e-mail info@ukces.org.uk, quoting the report title or series number.

Lesley Giles

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UK Commission for Employment and Skills

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Executive Summary

Introduction

This report provides labour market intelligence (LMI) for the Creative Media and Entertainment sector¹ to inform the strategic decision making of national governments in the development of employment and skills policy. The report is designed to provide sectoral intelligence at a broad and high level for strategic decision making purposes. Whilst it does contain some sub-sectoral and occupational intelligence, further detailed intelligence is available directly from Creative Skillset and Creative & Cultural Skills (see section 1.3).

Current performance of the sector

The 'Digital and Creative Industries'² have been highlighted as a key growth sector by Governments across the UK. This includes the Coalition Government in England, and devolved Scottish and Welsh Governments. The Northern Ireland advisor on Employment and Skills has also recently for the first time recognised the Creative Industries as an emerging sector in Northern Ireland. The following points summarise some of the key economic data regarding the sector:

- On average the Creative Media and Entertainment sector contributes £45,000 per employee job in (Gross Value Added) GVA, compared with a UK economy average of £46,000;
- Data from the Department for Culture Media and Sport (DCMS) show that the Creative Industries (excluding crafts), contributed £36.3bn in GVA to the UK economy in 2009;
- The sector exported services to the value of £8.9bn in 2009 (10.6 per cent of the UK's exports).

There are over 134,000 sector establishments in the UK employing nearly one million people. London is the main hub for Creative Media and Entertainment, with other significant clusters in the South East, East of England, South West and North West.

¹ As defined by SIC. Some key segments are systematically excluded; specifically industries not served well by SIC i.e. Content for Interactive Media, Facilities (excl. Post Production), Content for Computer Games and Craft, or the methodologies used which systematically exclude some or all freelancers upon which these industries rely. Where it has been possible, data for these segments from Skillset's and CCS' own research programmes have been inserted in this document but more can be found by going directly to www.skillset.org/research and www.creative-blueprint.co.uk

² Please see section 1.2 for information on the definitions used in the report

Employer numbers have grown by seven per cent since 2002 (compared to two per cent across the economy). Unlike many business sectors, the number of Creative Media and Entertainment start-ups outweighed the number of closures in 2009.

Employers in the sector tend to be small, compared to some other sectors in the economy—two thirds of establishments employ four or fewer employees.

The workforce

The sector is distinctive in its reliance on a wide range of highly specialised professional occupations across a huge range of areas. To illustrate this, 45 per cent of the workforce is employed in 'associate professional and technical' roles, compared with 19 per cent across the wider UK economy. Such roles are highly skilled and hence the predominance of them displays the specialist nature of work in the sector. The top 15 ranked occupations account for half of the workforce, with a great variety of other occupations represented in the remaining half.

The sector is also highly unusual in its employment model – 31 per cent are self-employed compared with 14 per cent across the wider UK economy, but many more in some areas such as film production in which virtually everyone is freelance. SSC research shows an increasing demand for freelancing from employers and a continuing trend towards more casual working practices.

Three quarters (75 per cent) of the workforce is employed full-time, although this is considerably lower in some areas, including 'libraries, archives and museums' and 'creative arts and entertainment'. The remaining quarter (25 per cent) are employed part-time.

Women are slightly underrepresented in the sector, making up 43 per cent of the workforce (compared to 46 per cent across the wider economy). Creative Skillset research has however shown older women to be severely underrepresented and identified issues specific to the sector around balancing family and working life as a key cause of this.

People from Black, Asian and Minority Ethnic (BAME) groups appear to be slightly underrepresented in the sector (seven per cent, compared to nine per cent in the wider UK economy). However, given the sector's concentration in urban areas such as London and North West England, in which BAME representation is much higher than the national average, they may in some parts be severely underrepresented.

Demand for and value of skills

The Creative Media and Entertainment sector has one of the highest proportions of people educated to Level 4+ of the whole economy (59 per cent compared to 37 per cent across the wider economy). Only education and health employ higher proportions.

In spite of what appears to be a heavy reliance on graduate recruitment, concern has been expressed by some employers that relevant degree courses do not adequately prepare graduates for a career in the sector, and in particular, struggle to keep up to date with technical changes occurring in the digital environment. The higher than average proportion of graduates from Creative Skillset accredited courses who find work in the sector suggests that this problem is now being successfully addressed.

The sector's workforce experiences some of the highest levels of variety, discretion over work and flexibility in working arrangements in the whole economy.

The proportion of employers with a training plan is much lower than the wider economy (23 per cent compared with 38 per cent), as is the proportion with a training budget (22 per cent compared with 29 per cent). The percentage of the workforce receiving training in the past year is also lower than average – 52 per cent compared with 59 per cent, perhaps reflecting both the lack of plans and budgets, and also the prevalence of smaller businesses in the sector, which are less likely to deliver training. Significantly, the proportion of the workforce receiving training has been decreasing steadily since 2002. However, it should be noted that sector employers invest significantly in training and development through collaborative work with SSCs. This may take the form of direct investment to training funds or participation in advisory councils and committees.

Those employed in 'associate technical and professional' roles are less likely to receive training than those at other levels – a major concern given the high level of employment at this level within the sector. In addition, the specialist nature of these roles makes the requirement for training all the more acute.

Many freelancers working in the sector experience barriers to receiving the training that they need due to their working patterns. Issues such as fear of losing work through committing time in advance and having to pay fees themselves are a particular issue.

Job specific training (86 per cent) and training in new technology (63 per cent) are the most common types of training funded or arranged for employees in the sector (UK Commission's Employer Skills Survey, 2011). Evidence from Creative Skillset's (2010) Creative Media Employer Survey gives further details on the types of training that may fall within these categories. The most common areas of provision include job specific skills such as particular software applications; technical skills such as computer programming, computer/software usage and editing; skills to develop content for multiple platforms; multi-skilling; and production skills.

Average income levels are much higher than the economy as a whole: the sector has the third highest average income for each year between 2008-2010, behind only 'financial, insurance and other professional services' and 'information and communication technologies'. This reflects the highly qualified nature of the sector. Nonetheless, pay and conditions among some freelancers and sole traders (some are excluded from SIC) and unpaid internships and unpaid work are an issue in some areas, especially for newer entrants to the sector.

Extent of skills mismatch

Almost 38,000 vacancies were reported by Creative Media and Entertainment sector employers. At three per cent of the workforce, these vacancy levels are similar to those across the overall economy, although the proportion of hard-to-fill vacancies that are due to skills shortages is higher.

The vacancy rate among 'associate professional and technical' roles is higher than average. Evidence from Creative Skillset's (2010) Creative Media Employer Survey contextualises this, as it shows distribution, sales and marketing, technical development, art and design and business management occupations (all of which map to this level) to be among the ten occupations that employers found hardest to fill.

The most common causes of hard to fill vacancies in both absolute terms and compared to the rest of the economy are a low number of applicants with the required skills (51 per cent compared with 40 per cent across the economy), and a low number of applicants with the required attitude, motivation and personality (26 per cent compared with 18 per cent). This is consistent with the earlier observation that some employers consider higher education not to be adequately preparing graduates for work in the sector.

The sector is more prone to report increased workload for other staff and delays developing new products or services than other sectors of the economy, as a result of unfilled vacancies.

The proportion of employers reporting staff retention problems is similar to the wider economy (four per cent compared with five per cent). Fewer employers than elsewhere in the economy cite 'not enough people interested in doing this type of work' as a reason for retention problems (36 per cent compared with 51 per cent), but more cite unattractive conditions of employment (33 per cent compared with 25 per cent).

Recruitment in many areas of the sector tends to be through informal methods such as word of mouth rather than through advertising.

Only six per cent of employers in the sector report skills gaps – the lowest in the whole economy (across which 13 per cent report a skills gap). There is a much narrower range reported using the employee measure across the sector, though slightly fewer (over 41,000 employees which equates to four per cent) report skills gaps than the average (five per cent of all employees). Smaller proportions of employers in the sector report problems arising from skills gaps, than in other sectors of the economy.

Forty-six per cent of Creative Media and Entertainment employers have employees who are over-qualified and over-skilled compared to 49 per cent across the whole economy, while 19 per cent of employees are over-qualified or over-skilled compared with 16 per cent across the wider economy. The relatively high levels of over-qualified people in the sector reflect earlier findings that due to an oversupply of potential new entrants, many people work unpaid in order to break into the sector and may have to operate below their potential for some time before securing permanent or appropriate employment.

The extent to which skills deficiencies are hampering the growth potential and the competitive position of the Creative Media and Entertainment sector are illustrated by recent reports at a sub-sector level (namely Film and VFX) that identify un-tackled mismatches as having significant impact on sector performance.

Drivers of change and their skills implications

The position with respect to governance is mixed for the sector. On the one hand, the sector is well placed strategically and the will exists in government to support the development of the sector in what remains an extremely challenging economic environment. The Creative Media and Entertainment sector is firmly positioned as a key driver of economic growth and economic recovery. Additionally, funding from the public sector to support skill and sector development will benefit the sector – for example UK Government investment in higher level apprenticeship places.

On the other hand, reduction in funding of the BBC and ‘legislative creep’ coupled with increasing regulation will pose challenges for the sector.

The sector continues to under-use considerable segments of the available labour pool. In particular, older women are leaving the workforce as they experience challenges with having a family and working in the sector, while many sectors rely on a predominantly young labour force in the context of an ageing population.

Competition within the UK and abroad is intense for the sector. The marketplace is becoming more global and many of the issues which drive the sector’s skills development are connected to international competition.

Technological change remains a central driver within the sector. The UK’s knowledge economy, in which Creative Media, financial services, health, education and high–medium tech manufacturing form the core, is driven by increasing levels of innovation and co-production with users and customers. Such co-production enables the sector to respond more quickly to new developments.

The rise in the use of social networking sites such as Facebook and Twitter, TV online and the development of smart phones is altering the way in which society accesses information. New media and channels have shifted the possibility of communication and purchase at any time of the day or night. An increasingly networked society means that a greater number of links are possible between a given consumer or company, and other consumers or companies, for less effort. These technological advancements have a number of profound skills implications that will impact the Creative Media and Entertainment workforce, from working innovatively and creatively with new technologies, harnessing the ability to multi-skill and the requirement to work across a variety of platforms, utilising ‘T- skills’.

Future skills needs

Employment in the Creative Media and Entertainment sector is projected to grow by 277,000 by 2020. Similar to the wider UK economy, this growth is likely to be focused around higher level occupations (manager, professionals and associate professionals).

The Creative Media and Entertainment sector is expected to be one of the highest growth sectors across the UK, with only construction, and hospitality, leisure and tourism experiencing higher levels of growth.

The increased need for STEM skills infused with creative talent will be key to the development of HE and FE courses and the success of the Creative Media and Entertainment sector.

Over the next decade globalisation offers the Creative Media and Entertainment sector significant opportunities, and equally significant challenges. The growing potential markets for UK produced content offer the possibility of massive expansion. However, the increasing range of foreign competitors, often receiving government support through favourable policies, is of increasing concern.

Divergence in the multiplicity of screens and variety of platforms through which people can consume content is a trend that is set to continue and increase in the decade to come. This will impact on the skillsets required by individuals to produce content and also the business models needed for businesses to be successful.

Significant investment in higher level and technical skills is required to address skills shortages and gaps in specialist roles including VFX, camera, set crafts, complex lighting, technical and backstage roles in live music and performing arts, specialist design skills, heritage and contemporary craft skills, archaeology skills, conservation, broadcast technology and engineering, and digital skills.

If the Creative Media and Entertainment sector is going to maximise its future opportunities national Vocational Educational Training (VET) policy urgently needs to better address the increasing higher level and technical skills required in the sector.

The need to create a better supply of 'job-ready' graduates into the sector will require increasing Government and sector specific solutions.

Priority areas for action

Based on the methodology employed by the UKCES that drew heavily on the risk-based approach adopted by Skills Australia, a number of priority areas for action have been identified. These are summarised as either Red, signifying skills deficits which are critical to the economy and require immediate action; Pink, indicating skills deficits which are again of critical importance to the economy but may be smaller in scale or have shorter lead times than those rated Red and; Amber, indicating skills deficits which are important to the economy and/or a distinct sector rather than critical and rated as moderate in scale and/or can be filled in the medium to short time frame.

Red skills priorities identified within the Creative Media and Entertainment sector include:

- There is significant and increasing demand for corporate managers able to cope with market change and increasing competition who can adopt high performance working practices. Change management and leadership will be key to the future competitiveness of the sector.
- The increasingly global scale of opportunities and competition and the increasing breadth and complexity of the sector will continue to invoke the need for skills in brokering and maintaining networks and alliances across both industrial and geographical boundaries. On a more specific level, need for foreign language skills is also significant in this context.
- The multi-platform environment in which the sector now operates has created new demands at both a managerial and professional level: at management level, for the project management and hybrid skills combining leadership with creativity and understanding of technology; and at professional level, to enable creation of content for distribution across multiple channels. Protection of intellectual property is also a major issue in this evolving climate.
- The fusion of innovation and creativity with technical skills has been highlighted as a priority for many years: in other words, harnessing the knowledge transfer more effectively between STEM subjects and creative media.
- 'T' shaped skills are an increasing priority for many sectors, so that individuals can combine the expertise they possess in their own area with some degree of skilling in other areas, and apply their specialist expertise across those areas in teams.

- Skills shortages and gaps exist within a range of associate professional and technical skills, including: camera, set crafts, complex lighting and technical and backstage roles in live music and performing arts, specialist design skills, heritage and contemporary craft skills, archaeology skills, conservation, graphic design and digital skills. Currently neither HE nor CPD is fully equipping individuals with the technical expertise needed by employers.

Pink skills priorities identified include:

- Sales and marketing skills are a priority in a number of sectors, including: radio, publishing and photo imaging.
- Fundraising and commercialisation are seen as major issues in a number of cultural areas such as heritage. As public funding is diminished, organisations will need the skills to harness new business development and philanthropic investment.
- A number of highly specialised skill areas within visual effects have long been identified as in short supply at a global level. VFX companies have traditionally recruited from all over the world to meet the demand for these roles and VFX appears on the UK Border Agency skills shortage occupation list.
- Broadcast technology and engineering continues to be an area of skills shortage due to a combination of lack of new recruits; deficiencies in higher and further education; ageing of the current workforce; lack of framework for continuing professional development and the pace of technological change.
- Creative skills are key to the future success of the sector as they are the basis for content creation on which other layers are founded. They include areas such as story or script writing, musical composition and performance, theatrical performance and painting.

1 Introduction

1.1 Purpose of report

The aim of this report is to provide authoritative labour market intelligence (LMI) for the Creative Media and Entertainment sector to inform the strategic decision making of national governments in the development of employment and skills policy. It is one of 15 UK Sector Skills Assessment (SSA) reports produced by Sector Skills Councils³ and the UK Commission for Employment and Skills.

SSAs combine top-down data from official sources with bottom-up sectoral intelligence to provide a consistent, comparable and rich understanding of the skills priorities within sectors across the four UK nations. The reports have been produced to a common specification (developed by the UK Commission in consultation with the four UK governments) and follow a consistent structure.

Reports have been produced for the following sectors of the economy:

- Agriculture, forestry and fishing
- Energy production and utilities
- Manufacturing
- Construction building services, engineering and planning
- Wholesale and retail trade
- Transportation and storage
- Hospitality, tourism and sport
- Information and communication technologies
- Creative media and entertainment
- Financial, insurance & other professional services
- Real estate and facilities management
- Government
- Education
- Health

³ Please note, the Education report was produced by LSIS who are not a licensed Sector Skills Council

- Care.

The reports contain intelligence on sectors and sub-sectors of particular interest to the four UK governments. As each nation has different 'key sectors', that are defined in different ways, it hasn't be possible define the SSA sectors in a way that matches precisely the key sectors identified by each nation government. Therefore, as far as possible, data has been reported in such a way that it can be aggregated to produce an overall picture for key sectors of interest. In some cases this will involve gathering information from more than one SSA report.

The reports are designed to provide sectoral intelligence at a relatively broad level for strategic decision making purposes. Whilst they do contain some sub-sectoral and occupational intelligence, further intelligence at a more granular level may be available from individual Sector Skills Councils. The output and detail from Creative Skillset's thirteen year strong Creative Industry steered research programme can be found here: www.skillset.org/research and more information about CCS' research can be found here: www.creative-blueprint.co.uk

In addition to the main UK reports, executive summaries have been produced for Scotland, Wales and Northern Ireland. The UK reports contain information on key regional variations between the four UK nations and within England where appropriate (for example if sectoral employment is focused in a particular geographic area). However, the reports are not designed to provide a comprehensive assessment of sectoral skills issues beyond the national level.

1.2 Defining the sector

The scope of the Creative Media and Entertainment SSA extends across the seven following 2-digit Standard Industrial Classification (SIC) codes.⁴ Analysis in this report is therefore in the main based on this sub-sector breakdown of the Creative Media and Entertainment sector. Table 1 below highlights SIC codes represented by Creative Skillset and Creative & Cultural skills within this report. A further detailed map of how these SIC map to each SSC's own footprint is included in Appendix 2.

⁴ Definitions, and data that sit beneath them, such as 'Creative Industries' and 'Digital and Creative Industries' are used in this report and they differ to a greater or lesser extent with the definition 'Creative Media and Entertainment'. Despite some differences e.g. the inclusion of architecture in some current definitions of the Creative Industries, the data are included to provide a useful indicator.

Table 1: SIC codes covered by Creative Skillset and Creative & Cultural Skills within SSA scope

SIC code	Description	SIC within scope that are in Creative Skillset/Creative & Cultural Skills footprint	SIC within scope that are in another SSC's footprint
58	Publishing	58.11 Book Publishing	58.21 Publishing of Computer Games
		58.12 Publishing of Directories & Mailing Lists	58.28 Other software publishing
		58.13 Newspaper Publishing	
		58.14 Publishing of Journals & Periodicals	
		58.19 Other Publishing	
59	Motion pictures	59.11/1 Motion Picture Production activities	
		59.11/2 Video Production activities	
		59.11/3 TV Programme Production activities	
		59.12 MP, V, and TV Programme Post-Production	
		59.13/1 Motion Picture Distribution activities	
		59.13/2 Video Distribution activities	
		59.13/3 TV Programme Distribution activities	
		59.14 Motion Picture Projection activities	
60	Programming and broadcasting	60.1 Radio Broadcasting	
		60.2 TV Programming & Broadcasting activities	
73	Advertising and market research	73.11 Advertising Agencies	73.20 Market research and opinion polling
		73.12 Media Representation Services	
74	Other professional scientific and technical activities (nb: includes design, photographic, translation)	74.10 Speciality Design	74.30 Translation and interpretation activities
		74.20/1 Portrait Photographic activities	74.90/1 Environmental consulting activities
		74.20/2 Other Specialist Photography	74.90/2 Quantity surveying activities
		74.20/3 Film Processing	74.90/9 Other professional, scientific and technical activities n.e.c.
90	Creative arts and entertainment	74.20/9 Other Photographic activities	
		90.01 Performing Arts	
		90.02 Support Activity to Supporting Arts	
		90.03 Artistic Creation	
91	Libraries, archives, museums, etc	90.04 Operation of Arts Facilities	
		91.01 Libraries and Archive Activities	91.04 Botanical and zoological gardens and nature reserves activities
		91.02 Museum Activities	
		91.03 Operation of Historical Sites and Buildings and Similar Visitor Attractions	

There are a small number of sectors traditionally considered to be part of the Creative Media and Entertainment sector that are not included within the scope of this SSA due to their classification elsewhere within the SIC system.

Content for Computer Games and Content for Interactive Media are outside the scope of the SIC system but evidence is presented in this SSA, where the structure allows and within the parameters placed on length, as they fall within the scope of 'Creative Media and Entertainment'. Creative Skillset has been producing labour market intelligence for these sectors for more than a decade (see <http://www.skillset.org/research/>), summaries of which are contained in digests on Creative Skillset's website:

Computer Games: http://www.skillset.org/games/industry/article_6918_1.asp

Interactive Media: http://www.skillset.org/interactive/industry/article_6921_1.asp

Creative Skillset's footprint for the fashion and textiles sector sits across a number of SSAs. Not within scope for this SSA are the two digit Textile (SIC 13), Clothing (SIC 14) and Leather (SIC 15) manufacture, and the four digit SIC of manufacture of man-made fibres (SIC 2060). These sit within the Manufacturing SSA. Additionally, agent and wholesale activities SIC 4616, 4624, 4641 and 4642 falls within the scope of the Wholesale and Retail SSA and repair of footwear and leather goods (SIC 9523) that are within scope of the Information and Communication SSA. Washing and cleaning of textiles and fur products (SIC 9301) are not in scope for SSA activity.

Additionally the craft sector is dispersed across a broad range of SIC not included within the scope of this SSA. Activity associated with the Jewellery sector and musical instrument manufacture (SIC 32 - Other manufacturing) can be found in the Manufacturing SSA. All other craft activity is poorly accounted for by the SIC system in general. Recent research on contemporary craft activity can be found by visiting www.craftscouncil.org.uk and Creative & Cultural Skills, working with BIS, have recently commenced a large scale mapping exercise for the heritage craft sector.

Further to this, specific creative and cultural sectors are included within the 2-digit SIC in scope, but are described either in 4-digit SIC or describe activity that falls within a number of SIC codes. As such, these sectors are only referenced when highlighted (for example, within SIC 90 can be found broad activity associated with performing arts, literature, visual arts, music and associated support activities, within SIC 74 can be found design activities and within SIC 91 can be found a range of activities that could be classed as relating to the cultural heritage sector).

For more information regarding the detail of these specific sectors please visit Creative & Cultural Skills' research website www.creative-blueprint.co.uk.

There are approximately 56,000 staff in the libraries, archives, records and information management services (LARIMS) workforce (Labour Force Survey, four quarter average 2010, ONS). The demographics and skills needs of the LARIMS workforce are included in this report, although responsibility for developing National Occupational Standards and qualifications for LARIMS rests with the Learning and Skills Improvement Service (LSIS) who have taken on some of the functions of the former Lifelong Learning UK.

1.3 Sector Skills Councils

The two main Sector Skills Councils whose remit extends across the Creative Media and Entertainment sector are Creative Skillset and Creative & Cultural Skills. The scope of these two SSCs is as follows:

Creative Skillset

Creative Skillset is the Creative Industries' Sector Skills Council which comprises TV, film, radio, content for interactive media, animation, content for computer games, facilities, photo imaging, publishing, advertising and fashion & textiles.

Creative Skillset is the industry body which supports **skills and training** for people and businesses to ensure the **UK creative industries** maintain their world class position.

Please see <http://www.skillset.org/research/> For a more detailed analysis of the skills needs of the Creative Industries, including a research library containing all previous research reports <http://www.skillset.org/research/index/>. This includes publications focusing on the size and shape of the industries; demand from the perspective of employers, employees and freelancers; analysis at a sub-sector and national level; analysis for particular groups (e.g. women); and also to access information regarding major activity Creative Skillset is leading in response to demand.

Creative & Cultural Skills

Creative & Cultural Skills is the Sector Skills Council for the creative and cultural industries. Its remit includes Craft, Cultural Heritage, Design, Literature, Music, Performing Arts and Visual Arts across the UK.

Creative & Cultural Skills bridge the gap between industry, education and the government, to give employers a real influence over education and skills in the UK.

Please see www.creative-blueprint.co.uk for more information on Creative & Cultural Skills' research programme, policy analysis and opinion.

1.4 Summary of methodology

This report combines top-down data with bottom-up intelligence to provide a rich assessment of sectoral skills priorities that is consistent and comparable with assessments produced for other sectors of the economy. The structure of the report was designed by the UK Commission for Employment and Skills and it has primarily been written using official data sources rather than evidence from SSCs. Where possible SSC research has been added, bringing further insight to the skills issues affecting the Creative Media and Entertainment sector.⁵

Three main types of information have been drawn on in the preparation of this report:

- Economy-wide quantitative data from core labour market information sources (such as the Labour Force Survey and the UK Employer Skills Survey)
- Sectoral, sub-sectoral and occupational specific quantitative data generated by SSCs / sector bodies and others (including Government departments and agencies, academics and professional associations)
- Qualitative information collected by SSCs / sector bodies and other organisations.

To ensure consistency and comparability across all 15 SSA reports, data from core labour market information sources (e.g. Labour Force Survey, UK Commission's Employer Skills Survey, Annual Business Inquiry) was centrally collected, processed and formatted. It was then distributed by the UK Commission to Sector Skills Councils / sector bodies for inclusion within the reports.

To meet consistency requirements, sub-sector analysis of data from core sources has primarily been undertaken at a 2-digit Standard Industrial Classification (SIC) code level (or by combining 2-digit SIC codes where appropriate).

⁵ Please note, the structure and parameters placed on length have prevented the inclusion of more contextual information from SSC's own research programmes (see <http://www.skillset.org/research/> and www.creative-blueprint.co.uk).

Figures from official data sources (e.g. Labour Force Survey and Employer Skills Surveys) prevent analysis of key segments of the Creative Media and Entertainment sector; specifically industries not served well by SIC i.e. Content for Interactive Media, Facilities (excl. Post Production), Content for Computer Games and Craft, or the methodologies used which systematically exclude some or all freelancers upon which these industries rely. Where it has been possible to, data for these segments from Creative Skillset's and CCS' own research programmes have been inserted in this document.

Creative Skillset has been carrying out primary research since 1999 to provide essential detailed analysis of the skills needs of the Creative Media Industries with, and at the request of, these Industries. The Creative Media Industries and DCMS with Creative Skillset first reviewed data available for the industry from the ONS and other sources in 1999 and concluded that additional data are required to target a response to skills needs including: a measure of the industry's size and shape, demand for and supply of skills, to a commonly understood sub-sectoral level, using bespoke methodologies to ensure complete coverage (all sectors, employees and freelancers) and relevant data generation. Please see Appendix 3 for a summary of the limitations of official data sources and Appendix 4 to highlight the key differences in definition employed by Creative Skillset against official data sources.

The Research Programme developed to fill these gaps consists of a regular cycle of research including for example an Employment Census and Workforce and Employer Surveys. These surveys generate data needed for Creative Skillset to target resource effectively.

Creative Skillset's Research Committee is responsible for steering Creative Skillset's Research Programme. The Research Committee consists of professionals from across the Creative Industries and Government. Many of the organisations represented were active in the establishment of the Research Programme 10 years ago, and have contributed to its development as Creative Skillset's remit has grown.⁶

The current limitations of official data sources are also discussed in a recent report by the Creative Industries Council Skillset Skills Group (2012). The report recommends that UK national accounts systems need to be better suited for the modern knowledge economy, and official industry definitions and classifications should be more precise, in order to capture a wide range of different creative activities and rapidly changing skills demands that are not currently recognised.

⁶ For further details of the current membership composition http://www.skillset.org/research/committee/article_7341_1.asp

Creative & Cultural Skills' research programme provides our industries with primary, accurate and relevant data. Fundamental to our research is that it:

- Develops and underpins industry-led campaigns
- Influences supply-side agencies, including colleges, universities and UK governments in providing the appropriate services to the
- Produces publicly available and consumer oriented labour market intelligence
- Reflects the strategic objectives of the organisation
- Develops links between research and policy development
- Informs and influences Creative & Cultural Skills' policies and/or those of stakeholders
- Establishes strong collaboration with external stakeholders and agencies across the UK to maximise data collection and the research budget.
- Responds to and reflects Government policy and initiatives.

Creative & Cultural Skills gathers information in order to understand what is a complex industry, an industry where official definitions of business output do not align particularly well with the activity that occurs within the sector itself. As a consequence much of our output (specifically those associated with presenting data about the size, shape and economic contribution of the sector), require detailed methodological approaches that provide robust data to our sectors, but data that is also usable, relevant and accurate, which are described in more detail in the Technical Appendix (Appendix 1).

Creative & Cultural Skills' research is tailored to these methodological developments and our outputs are intended to provide specific findings for each of the sectors that we represent, including sectors such as design and craft where SIC analysis is not particularly useful.

It is worth noting that the combination of intelligence from these two research programmes within this document occasionally means that research is reported that diverges in methodology from official data sources. Creative Skillset and Creative & Cultural Skills have explained how the different sources map onto each other where relevant. Creative Skillset is leading activity to address this on-going issue with Creative & Cultural Skills.

The report also draws on qualitative research that has been undertaken to explore sectoral skills issues in more detail. Qualitative research with small samples of employers (and others), most commonly through interviews and focus groups, seeks to provide rich and detailed understanding and insight, rather than measurement. Samples tend to be designed to be broadly representative of the wider population, to gather a range of views. In terms of skills research with employers, size and sector tend to be key drivers of demand and therefore these are usually the main characteristics that are taken into account when designing samples.

The report synthesises and contextualises information from the sources identified above and, by undertaking a rigorous analysis of it, turns the information into intelligence.

Further information

Further methodological information is provided within the Technical Appendix. This includes descriptions of the main quantitative and qualitative sources used and a brief outline of the key considerations when using SSC labour market information sources.

2 Current performance of sector

Chapter Summary⁷

- The 'Digital and Creative Industries' have been highlighted as a key growth sector by the UK Governments.
- On average the Creative Media and Entertainment sector contributes £45,000 of Gross Value Added (GVA) per employee job (similar to the UK economy average of £46,000), with the 'programming and broadcasting' sector contributing a particularly high level of GVA per job (£128,000).
- Data from the Department for Culture, Media and Sport (DCMS) shows that the Creative Industries, excluding Crafts, contributed £36.3bn in GVA to the UK in 2009.
- The sector exported services to the value of £8.9bn in 2009 (10.6 per cent of the UK's exports).
- There are over 134,000 establishments in the UK employing nearly one million individuals - London is the main hub, with further sizeable pockets in the South East, East of England, South West and North West.
- NESTA identify sector hotspots in London, Bath, Brighton, Bristol, Cambridge, Guildford, Edinburgh, Manchester, Oxford and Wycombe-Slough.
- Employer numbers have grown by seven per cent since 2002 (compared to two per cent across the economy).
- Employers tend to be small - 66 per cent of establishments have just 2-4 employees.
- Unlike many business sectors, the number of Creative Media and Entertainment start-ups outweighed the number of closures in 2009.
- Despite growth in the number of establishments, the overall size of the workforce has actually decreased between 2002 and 2010.

⁷ NB: Figures from official data sources (e.g. Labour Force Survey and Employer Skills Surveys) prevent analysis of key segments of the Creative Media and Entertainment sector. For further information on this see section 1.4.

2.1 Economic performance

The Creative Media and Entertainment sector is a major contributor to the UK economy. The 'Digital and Creative Industries' have indeed been highlighted as a key growth sector in the Government's *Plan for Growth* (HM Treasury and BIS, 2011) which acknowledges that the sector has the potential to drive significant growth in the UK, and a role to play in leading the country out of recession. The Scottish and Welsh Government's also identify the Creative Industries as one of a small number of key sectors whilst in Northern Ireland, the Creative Industries for the first time have been recognised as an emerging sector.

The UKCES report that key occupational groupings related specifically to the Creative Media and Entertainment sector are forecast to be amongst the highest growth occupations within the economy (UKCES, 2010a).

It is proposed that the Digital and Creative Industries will particularly benefit from: an overhaul of development and planning rules to support superfast broadband roll-out; substantially reducing burdens of the communications and media regulatory framework; and significantly increasing the level of support to Intellectual Property (IP)-intensive businesses to ensure they can exploit their IP domestically and overseas (HM Treasury and BIS, 2011).

This section provides specific economic and labour force data and evidence to show why such priority has been placed on the sector.

2.2 The current economic performance and competitive position of sector

GVA data per employee job for the Creative Media and Entertainment sector in 2009 is presented in Table 2, cut by nation. This shows that on average each person in the Creative Media and Entertainment sector contributes £45,000 in GVA (similar to the average of £46,000 across the economy). This varies from £49,000 in England and £38,000 in Northern Ireland, to £30,000 in Wales and only £12,000 in Scotland. Whilst there are substantial differences in GVA per employee job reported, these differences are driven by the Creative Media and Entertainment sub-sectoral composition within each nation (see also Table 3 for more detail on the relative GVA per head for the sub-sectors within the overall Creative Media and Entertainment sector). For instance, much of the high GVA per head in the programming and broadcasting sub-sector is based within London and makes up a larger proportion of the sector in England.

Table 2: Estimated workplace gross value added per employee job at current basic prices, 2009

SSA Sector	UK	England	Wales	Scotland	Northern Ireland
	£000s	£000s	£000s	£000s	£000s
Agriculture, forestry and fishing	35	41	11	21	25
Energy production and utilities	131	134	118	127	107
Manufacturing	52	51	49	61	53
Construction, building services, engineering and planning	65	66	54	60	56
Wholesale and retail trade	33	33	27	29	27
Transportation and storage	50	51	44	50	41
Hospitality, tourism and sport	23	23	21	22	20
Information and communication technologies	83	84	72	77	63
Creative media and entertainment	45	49	30	12	38
Financial, insurance & other professional services	86	89	57	69	63
Real estate and facilities management	85	86	103	67	98
Government services	39	40	33	35	40
Education	33	33	32	36	33
Health	27	27	26	25	23
Care	30	30	28	31	26
Not within scope	32	33	27	35	30
All sectors	46	47	38	43	38

Source: UK Commission estimates based on Regional Accounts; Annual Business Survey; Business Register and Employment Survey (BRES). See technical appendix for basis for estimates.

Notes: Figures for Real estate and facilities management sector include contribution from owner-occupier imputed rental. All figures exclude Extra-Regio element. Estimates will tend to overstate the level of GVA per job in those sectors with high levels of self-employment.

GVA data per employee job is also available for individual sub-sectors of the Creative Media and Entertainment sector (as defined by 2-digit SIC, see Table 3). In 'programming and broadcasting' GVA per person is very high at £128,000, explained by the high value added by the sector and relative to other sectors there are fewer people working within it. The GVA per employee job in 'advertising and market research' is £52,000, whilst 'motion pictures' and 'publishing' are also both around £50,000. The GVA for the 'libraries, archives and museums' sector is £0, but this is accounted for by the public service nature of such facilities. A full breakdown of GVA figures by sector is presented in Table 2.2 below.

Table 3: Estimated workplace gross value added per employee job at current basic prices (2009) for Creative Media and Entertainment SIC divisions (£000s)

SIC07 codes	Description	£000s
58	Publishing	52
59*	Motion Pictures*	49
60*	Programming and broadcasting*	128
73	Advertising and market research	52
74	Other professional scientific and technical activities	41
90*	Creative arts and entertainment*	64
91	Libraries, archives, museums	0

Source: UK Commission estimates based on Regional Accounts; Annual Business Survey; Business Register and Employment Survey (BRES). See technical appendix for basis for estimates.

Notes: Figures for Real estate and facilities management sector include contribution from owner-occupier imputed rental. All figures exclude Extra-Regio element. Estimates will tend to overstate the level of GVA per job in those sectors with high levels of self-employment.

Further data from the Department for Culture, Media and Sport (DCMS) shows that in 2009 the Creative Industries, excluding crafts, contributed £36.3bn in GVA to the UK (DCMS, 2011a). The Creative Industries actually accounted for 2.8 per cent of GVA in the UK in 2009, with crafts contributing an additional £3.1bn of GVA in 2009 and literature £2bn (Creative & Cultural Skills, 2010).

In an international context, a recent report by UNCTAD highlighted that the UK's Creative Industries were worth 5.8 per cent of the UK's overall GVA, a figure higher than for equivalent analysis of Australia, Canada, France and the United States⁹. The UNCTAD analysis of UN COMTRADE data also indicated that the United Kingdom in 2008 was the sixth leading global exporter of creative goods, exporting \$19.9bn worth (UNCTAD, 2010).

The advertising sub-sector is a key part of the UK Creative Media and Entertainment sector, and a leading sector for the UK globally within the knowledge economy. A recent report which systematically mapped the economic impact of the UK's advertising industry on the UK economy concludes that the core impact – including direct, indirect and induced impacts – was £15.6bn for 2008. International comparison data shows a clear correlation between countries' degree of advertising spend, or advertising spend growth, and a range of important economic outcomes, such as growth, innovation, and consumer propensity to spend. There is a less clear, but present correlation between advertising spend and level of national economic competitiveness (Albert and Reid, 2011).

⁹ Please note the UNCTAD GVA figure for the UK was taken before the methodology for calculating the Creative Industries by the DCMS changed between 2010 and 2011. Further information can be found here: http://www.culture.gov.uk/what_we_do/creative_industries/default.aspx

An industry report also shows that the UK Film sector contributed £4.2bn to the UK economy in 2008 (Oxford Economics, 2010).

In terms of the music and performing arts sector (and in particular live events), in 2009 a survey of the Association of Independent Festivals members alone found that 340,000 people attended events, contributing in excess of £135m into the UK economy. With 60 per cent of festival goers staying for three to four days in the area surrounding the festival, an additional £16.3m was directly inputted into local economies (Association of Independent Festivals, 2009).

The recent Innovation and Research Strategy from BIS argues that for the UK to compete in a global environment, investment in innovation and creativity is essential. The Creative Media and Entertainment sector is well placed to contribute to this aspiration through sectors such as design with the document stating: "We ... have world-class businesses in technology-based sectors, designers and creative industries. These are national assets that form the foundation of our future competitiveness" (BIS, 2011a, p 4).

The link between the use of design and improved business performance across key measures including turnover, profit and market share has been well established. Over a ten year period, the Design Council tracked publicly quoted firms that use design intensively and compared them to less intensive design users.

Between 1995 and 2004, the share prices of design-conscious companies outperformed other firms by 200 per cent. The Design Council's 2007 Value of Design Survey of over 500 businesses found that for every £100 a design-alert business spends on design, turnover increases by £225 (Design Council, 2007).

Recent research by DEMOS analysing GVA data and BIS Small and Medium sized Enterprise statistics has also shown that in business survival, the Creative Media and Entertainment sector performs better than the UK economy in general:

At 49.7 per cent, the survival rate of businesses in the creative industries after five years is one of the best; it is exactly the same as that for 'Real estate, renting and business', with 'Electricity, gas and water supply' (50.0 per cent) and 'Construction' (50.3 per cent) doing slightly better. Only the 'Education, health and social work' sector – businesses that operate in the public sector – has a notably better five-year aggregate survival rate; at 60.2 per cent, its survival rate was 10.5 per cent above that of the creative industries. (Burrows and Ussher, 2011, p.53).

Indeed within the Creative Media and Entertainment sector Radio and TV (54.3 per cent), and Music and the Visual and Performing Arts (53.3 per cent) significantly outperform five year survival rates of businesses across the UK.

2.3 Employer Profile

The Creative Media and Entertainment sector comprises 134,115 establishments across the UK as shown in Table 4. This equates to five per cent of all establishments across the UK economy. The vast majority of these establishments are located in England (121,900) and Table 5 gives a further breakdown within the English regions. London is the main hub for Creative Media and Entertainment establishments (43,255), with further sizeable groups located in the South East (22,760), East of England (12,210), South West (10,605) and North West . In terms of the other UK nations, a sizeable minority of establishments are located in Scotland (6,830), with the remainder located in Wales (3,640) and Northern Ireland (1,745).

Table 4: Number of establishments by sector and nation (2010)

	UK		England		Scotland		Wales		Northern Ireland	
	Number	%	Number	%	Number	%	Number	%	Number	%
Agriculture, forestry and fishing	144,895	6%	96,770	4%	17,625	9%	14,210	13%	16,290	19%
Energy production and utilities	13,290	1%	10,365	0%	1,495	1%	865	1%	565	1%
Manufacturing	144,115	6%	124,235	6%	9,395	5%	6,040	5%	4,445	5%
Construction, building services, engineering and planning	358,455	14%	303,300	14%	27,845	14%	14,280	13%	13,030	15%
Wholesale and retail trade	509,215	20%	431,330	20%	38,165	20%	23,000	20%	16,720	20%
Transportation and storage	83,825	3%	70,685	3%	6,370	3%	3,925	3%	2,845	3%
Hospitality, tourism and sport	223,370	9%	185,390	8%	20,515	11%	11,580	10%	5,885	7%
Information and communication technologies	131,065	5%	120,095	5%	6,610	3%	3,130	3%	1,230	1%
Creative media and entertainment	134,115	5%	121,900	6%	6,830	4%	3,640	3%	1,745	2%
Financial, insurance & other professional services	255,000	10%	228,725	10%	14,770	8%	7,160	6%	4,345	5%
Real estate and facilities management	149,325	6%	129,340	6%	10,610	5%	5,730	5%	3,645	4%
Government services	52,210	2%	40,870	2%	5,625	3%	2,985	3%	2,730	3%
Education	67,125	3%	55,020	3%	5,535	3%	3,250	3%	3,320	4%
Health	55,135	2%	46,925	2%	3,895	2%	2,515	2%	1,800	2%
Care	85,935	3%	70,460	3%	7,810	4%	4,710	4%	2,955	4%
All economy	2,574,230	100%	2,183,845	100%	193,305	100%	112,810	100%	84,270	100%

Source: Inter-departmental Business Register (IDBR), ONS

Table 5: Number of establishments by sector and English region (2010)

	North East	North West	Yorkshire and the Humber	East Midlands	West Midlands	East	London	South East	South West
Agriculture, forestry and fishing	3,870	11,305	11,205	10,770	11,880	12,170	935	11,785	22,850
Energy production and utilities	475	1,460	1,155	1,025	1,065	1,320	950	1,605	1,310
Manufacturing	4,650	15,950	13,100	12,915	15,930	15,235	13,350	20,025	13,080
Construction, building services, engineering and planning	10,845	35,520	26,035	24,975	28,750	41,485	42,520	58,785	34,385
Wholesale and retail trade	16,630	55,955	41,975	36,895	45,695	48,635	67,620	71,850	46,075
Transportation and storage	2,610	8,775	7,270	6,830	7,930	9,305	9,190	11,570	7,205
Hospitality, tourism and sport	8,395	23,095	17,600	14,030	16,700	19,290	32,470	31,885	21,925
Information and communication technologies	2,325	10,885	6,685	6,900	9,260	14,735	29,655	28,805	10,845
Creative media and entertainment	2,660	10,035	6,735	6,215	7,425	12,210	43,255	22,760	10,605
Financial, insurance & other professional services	5,440	23,475	14,900	14,950	18,300	23,850	61,915	45,495	20,400
Real estate and facilities management	4,185	14,800	10,225	9,390	11,925	15,045	27,475	22,980	13,315
Government services	1,815	4,810	4,260	4,270	4,040	4,215	6,495	6,340	4,625
Education	2,495	6,890	4,965	4,810	5,465	6,330	8,215	9,925	5,925
Health	2,010	6,255	4,265	3,830	4,570	4,850	8,045	8,280	4,820
Care	3,575	9,340	6,950	6,110	6,940	7,210	10,725	11,700	7,910
All economy	75,975	255,705	187,810	174,700	210,065	253,120	392,540	394,505	239,425

Source: Inter-departmental Business Register (IDBR), ONS

Table 6 breaks down the 134,000 Creative Media and Entertainment sector establishments by broad sub-sectors. More than 50,000 establishments work in 'other professional scientific and technical activities' and this is followed by those active in 'creative arts and entertainment' (approaching 29,000). 'Advertising and market research' and 'motion pictures' each account for around 12 to 14 per cent of the total number of sector establishments. 'Publishing' and to a greater extent 'libraries, archives and museums' and 'programming and broadcasting' make up a smaller proportion of the total number of establishments.

Table 6: Number of establishments by Creative Media and Entertainment 2-digit SIC (2010)

SIC07 codes	Description	Establishments
		000s
58	Publishing	11,420
59	Motion Pictures	16,570
60	Programming and broadcasting	1,740
73	Advertising and market research	18,470
74	Other professional scientific and technical activities	50,290
90	Creative arts and entertainment	28,790
91	Libraries, archives, museums	6,835

Source: *Inter-departmental Business Register (IDBR), ONS*

Between 2006 and 2010 the number of establishments within the Creative Media and Entertainment sector has continued to grow steadily, by seven per cent overall (see Table 7), higher than the average across the UK economy of two per cent. This growth is largely due to an increase of 10 per cent in the sector within England between 2006 and 2010 (see Table 8). The other three nations all saw a decrease in the number of establishments during this time period, most notably since 2008.

Table 7: Number of establishments by sector 2006-2010 (UK)

	2006	2007	2008	2009	2010	% Change 2006-2010
Agriculture, forestry and fishing	146,485	158,080	163,715	146,620	144,895	-1%
Energy production and utilities	18,170	18,260	11,435	12,980	13,290	-27%
Manufacturing	165,675	163,525	167,335	151,165	144,115	-13%
Construction, building services, engineering and planning	230,610	240,535	258,055	374,320	358,455	55%
Wholesale and retail trade	533,105	532,905	532,060	520,070	509,215	-4%
Transportation and storage	70,425	70,750	71,665	86,680	83,825	19%
Hospitality, tourism and sport	219,770	222,920	227,430	229,690	223,370	2%
Information and communication technologies	136,395	140,505	144,080	134,805	131,065	-4%
Creative media and entertainment	125,100	130,185	131,180	132,225	134,115	7%
Financial, insurance & other professional services	271,310	283,920	287,015	256,915	255,000	-6%
Real estate and facilities management	180,305	191,195	201,915	155,855	149,325	-17%
Government services	159,395	164,690	54,875	52,060	52,210	-67%
Education	28,935	28,880	66,055	66,725	67,125	132%
Health	25,860	25,810	53,300	53,900	55,135	113%
Care	40,150	40,075	82,755	83,675	85,935	114%
All economy	2,533,855	2,600,065	2,643,215	2,634,790	2,574,230	2%

Source: Inter-departmental Business Register (IDBR), ONS

Data for 2006-2008 is based on SIC 2003 whereas data beyond this use SIC 2007. Some of the data for 2006-2008 is based on estimates. For full details please see the technical appendix (Appendix 1).

Table 8: Number of Creative Media and Entertainment establishments by nation 2006-2010

	2006	2007	2008	2009	2010	% Change 2006-2010
England	110,905	115,340	116,045	120,215	121,900	10%
Scotland	7,850	8,215	8,610	6,555	6,830	-13%
Wales	4,355	4,570	4,440	3,655	3,640	-16%
Northern Ireland	1,990	2,056	2,088	1,800	1,745	-12%

Source: Inter-departmental Business Register (IDBR), ONS

Data for 2006-2008 is based on SIC 2003 whereas data beyond this use SIC 2007. Some of the data for 2006-2008 is based on estimates. For full details please see technical appendix.

Creative Media and Entertainment sector establishments are primarily small or medium in size, as shown in Table 9. Two-thirds (66 per cent) of establishments have between two and four employees, which is higher than most other sectors and the UK economy average of 52 per cent. Only a tiny minority of employers in the Creative Media and Entertainment sector have more than 250 employees.

Table 9: Size of establishments by sector (UK) (2010)

	Number of employees						All Number
	2-4 %	5-9 %	10-24 %	25-49 %	50-250 %	251+ %	
Agriculture, forestry and fishing	80	14	5	1	**	**	97,910
Energy production and utilities	36	22	20	10	10	2	10,265
Manufacturing	43	22	18	8	8	1	108,050
Construction	67	18	10	3	2	**	211,710
Wholesale and retail trade	49	27	16	4	3	1	385,760
Transportation and storage	48	20	16	7	8	1	52,620
Hospitality, tourism and sport	42	30	19	6	3	**	198,630
Information and communication technologies	68	15	10	4	3	1	56,710
Creative media and entertainment	66	17	10	4	3	**	62,305
Financial, insurance & other professional services	57	21	14	4	3	1	134,900
Real estate and facilities management	62	21	11	3	3	1	95,270
Government services	34	21	20	10	12	4	41,505
Education	20	14	20	23	21	2	56,740
Health	31	24	25	10	7	2	47,570
Care	26	24	28	13	8	**	75,725
All economy	52	22	15	6	4	1	1,742,370

Source: Inter-departmental Business Register (IDBR), ONS

** Denotes figures of greater than 0% but less than 0.5%

There is more variation in establishment size by Creative Media and Entertainment sub-sectors. Table 10 shows that three-quarters of 'creative arts and entertainment' and 'other professional scientific and technical activities' establishments have just 2-4 employees. In contrast establishments in the 'libraries, archives and museums' sector are less likely to fall

into this very small size band. This illustrates the various economies of scale and barriers to entry that exist within the sector. For instance, other professional scientific and technical activities that include photographic activities require small overheads to set up on a small scale with the style of work suited to smaller establishment numbers. Others such as libraries, archives and museums and programming and broadcasting activities operate on a larger scale due to associated overheads, style of work undertaken and the number of processes that require undertaking within their environment.

Table 10: Size of establishments by Creative Media and Entertainment 2-digit SIC (2010)

	Number of employees						
	2-4	5-9	10-24	25-49	50-250	251+	All
	%	%	%	%	%	%	Number
Publishing	54	20	14	5	5	2	6,890
Motion Pictures	65	14	10	6	5	**	6,085
Programming and broadcasting	49	17	20	7	5	2	920
Advertising and market research	61	18	12	4	4	1	9,380
Other professional scientific and technical activities	75	16	7	2	1	**	22,200
Creative arts and entertainment	76	14	6	2	2	**	11,010
Libraries, archives, museums	36	27	21	9	6	1	5,820

Source: Inter-departmental Business Register (IDBR), ONS

** Denotes figures of greater than 0% but less than 0.5%

Table 11 gives a breakdown of the size of Creative Media and Entertainment establishments by nation. There is very little variation in size, with the vast majority of employers in each nation having just 2-4 employees and very few having more than 250. Scotland and Northern Ireland both have a slightly lower proportion of employers in the very smallest size band (60 per cent). Any patterns that do exist are likely to be related to the sub-sector composition of employers in each nation.

Table 11: Size of Creative Media and Entertainment establishments by nation (2010)

	England		Scotland		Wales		Northern Ireland	
	Number	%	Number	%	Number	%	Number	%
2-4	36,890	66	2,105	60	1,215	65	685	60
5-9	9,440	17	715	20	330	18	220	19
10-24	5,555	10	375	11	205	11	155	13
25-49	1,985	4	180	5	45	2	50	4
50-250	1,665	3	100	3	45	2	40	3
251+	270	**	20	1	15	1	0	0
Total	55,805	100	3,495	100	1,855	100	1,150	100

Source: Inter-departmental Business Register (IDBR), ONS

** Denotes figures of greater than 0% but less than 0.5%

In 2009 there were 24,290 business start-ups in the Creative Media and Entertainment sector, which outweighed the 20,805 closures during the same year. This contrasts with the wider UK economy, and many other sectors, where the number of business closures in 2009 outweighed the number of start-ups (see Table 12). This is most likely an indication of the recession with people being made redundant and the ability to take advantage of the low barriers to entry that exist within sectors such as photography, photo imaging and interactive media to take up self-employment opportunities.

Within the Creative Media and Entertainment sector, start-ups did not outnumber closures in all sub-sectors and Table 13 breaks figures down further. The number of closures outnumbered the number of start-ups in 'publishing', 'creative arts and entertainment' and 'libraries, archives and museums'.

Table 12: Business (enterprise) start-ups and closures 2009 (UK)

Sector	Start-ups	Closures
	Number	Number
Agriculture, forestry and fishing (SIC 75 only)	285	190
Energy production and utilities	1,270	408
Manufacturing	10,570	15,445
Construction, building services, engineering and planning	35,835	51,040
Wholesale and retail trade	38,760	47,090
Transportation and storage	6,980	10,805
Hospitality, tourism and sport	23,345	28,030
Information and communication technologies	16,120	19,935
Creative media and entertainment	24,290	20,805
Financial, insurance & other professional services	25,640	25,765
Real estate and facilities management	12,805	16,275
Government services (SIC 94 only)	1,010	1,260
Education	3,485	3,160
Health	4,135	3,110
Care	2,745	2,165
Other sectors	28,750	32,135
All economy	236,025	277,618

Source: *Business Demography - Enterprise Births, Deaths and Survivals 2009* (ONS)

Table 13: Business (enterprise) start-ups and closures in 2009 by Creative Media and Entertainment 2-digit SIC (UK)

SIC07 codes	Description	Start-ups	Closures
58	Publishing	1,080	1,605
59	Motion Pictures	2,540	2,210
60	Programming and broadcasting	265	185
73	Advertising and market research	3,455	2,625
74	Other professional scientific and technical activities	14,585	11,125
90	Creative arts and entertainment	2,290	2,930
91	Libraries, archives, museums	75	125

Source: *Business Demography - Enterprise Births, Deaths and Survivals 2009* (ONS)

2.4 Extent to which sector employers compete internationally

The Creative Industries exported services to the value of £8.9bn in 2009 (10.6 per cent of the UK's exports). The Publishing sector has the highest exports of services amongst the Creative Industries (£2.6bn, 3.1 per cent of the UK's exports) with evidence pointing to the US, Ireland, Germany, the Netherlands, Australia and Canada as major export areas. (UK Trade and Investment, 2012) closely followed by TV & Radio (£2.2bn, 2.6 per cent the UK's exports). Research undertaken by PACT (2011) highlighted how Europe, the USA, Australia and New Zealand were key TV export markets. Film, Video & Photography and Advertising sectors exported £1.6bn and £1.5bn (1.9 per cent and 1.8 per cent) respectively (DCMS, 2011a). In terms of the export of creative services it is estimated that the UK is second only to the US in world rankings (Technology Strategy Board, 2009).

Forecasts in 2010 by PwC suggested that the UK entertainment and media (E&M) market would grow by 3.7 per cent per annum on average for the four years to 2014 (Stokes, 2010). The underlying reason for optimism in growth for the Creative Media and Entertainment sector is the opening up of new markets and new opportunities globally as a result of digital communications and global supply networks. The global market for traded goods and services of the Creative Media and Entertainment sector has enjoyed an unprecedented dynamism in recent years.

Global growth in the E&M market is expected to reach five per cent year-on-year and total \$1.7 trillion by 2014. Certainly, recent PwC evidence shows that despite the challenging economic backdrop there were more European Entertainment & Media (E&M) deals and with higher deal value in 2011 than in 2010. Both deal volumes and deal value were approximately 15-20 per cent up on 2010, and UK listed media stocks out-performed the main indices (PwC, 2012).

Globalisation offers significant opportunities as well as potential issues for the Creative Media and Entertainment sector. In summary these are:

- Growing potential markets for UK-produced content in all formats, across all media;
- An increasing range of foreign competitors with access to the UK market;
- Increasing potential for sourcing services from the UK to overseas ('off shoring').

In all three cases, it is the emerging economies of India and China that will have greatest impact on the UK industry. The growing populations of both countries will help to ensure that they maintain their emerging roles as both suppliers and markets: by 2010, India had added 83 million workers to the global economy, China had 56 million, and the EU just 100,000 (Morgan Stanley, 2010). The current orthodoxy is to treat China and India as key suppliers in the short term and key markets only in the longer term.

2.5 Employment

There are nearly one million people working in the Creative Media and Entertainment sector, representing three per cent of the whole UK workforce. This section shows how the workforce is distributed across the UK, within the sector itself and how these trends have changed over the past decade.

2.6 Employment levels

The Creative Media and Entertainment sector workforce numbers 987,000. The vast majority (89 per cent) of these individuals are employed in England, with seven per cent working in Scotland, three per cent in Wales and just one per cent in Northern Ireland (see Table 14). This is a very similar profile to the proportion of establishments based in each nation.

Table 14: Total employment by sector and nation (2010) ('000s)

	UK		England		Scotland		Wales		Northern Ireland	
	000s	%	000s	%	000s	%	000s	%	000s	%
Agriculture, forestry and fishing	406	100	296	73	51	13	31	8	27	7
Energy production and utilities	473	100	346	73	88	19	25	5	14	3
Manufacturing	2,970	100	2,542	86	199	7	138	5	91	3
Construction, building services, engineering and planning	2,697	100	2,270	84	244	9	113	4	71	3
Wholesale and retail trade	4,140	100	3,471	84	353	9	205	5	112	3
Transportation and storage	1,448	100	1,252	86	117	8	46	3	33	2
Hospitality, tourism and sport	2,046	100	1,704	83	198	10	100	5	44	2
Information and communication technologies	761	100	675	89	56	7	18	2	13	2
Creative media and entertainment	987	100	876	89	65	7	32	3	14	1
Financial, insurance & other professional services	2,001	100	1,768	88	138	7	53	3	41	2
Real estate and facilities management	978	100	848	87	75	8	38	4	18	2
Government services	2,209	100	1,835	83	173	8	111	5	89	4
Education	3,088	100	2,625	85	235	8	154	5	75	2
Health	2,087	100	1,713	82	199	10	111	5	64	3
Care	1,729	100	1,409	81	183	11	97	6	40	2
Whole Economy	28,855	100	24,331	84	2,446	8	1,312	5	766	3
<i>Unweighted bases</i>	<i>194.448</i>	<i>100</i>	<i>161.501</i>	<i>83</i>	<i>17.022</i>	<i>9</i>	<i>8.693</i>	<i>4</i>	<i>7.232</i>	<i>4</i>

Source: Labour Force Survey 2010, ONS

2.7 Distribution of employment

Table 15 gives a breakdown of the 987,000 individuals employed in the Creative Media and Entertainment sector by broad sub-sector. The highest number of individuals (231,000) are employed in 'other professional scientific and technical activities', with a further 198,000 employed in the 'publishing' sector. Around 150,000 individuals are employed in 'creative arts and entertainment' and 'advertising and market research'. A more detailed profile of the Creative Media and Entertainment workforce cut by sub-sector and drawn from SSC primary research is included in Appendix 4.

Table 15: Total employment by Creative Media and Entertainment 2-digit SIC (2010)

SIC07 codes	Description	Employment
		000s
58	Publishing	198
59	Motion Pictures	91
60	Programming and broadcasting	54
73	Advertising and market research	150
74	Other professional scientific and technical activities	231
90	Creative arts and entertainment	154
91	Libraries, archives, museums	110

Source: Labour Force Survey 2010, ONS

Table 16 breaks down the workforce in each English region and shows that the Creative Media and Entertainment sector share of the overall workforce is highest within London (eight per cent). In all other regions the relative share varies from two to four per cent.

Table 16: Total employment by sector and English region, % share within region (2010)

	London	South East	East of England	South West	West Midlands	East Midlands	Yorkshire and the Humber	North West	North East
Agriculture, forestry and fishing	0	1	1	3	2	2	1	1	1
Energy production and utilities	1	2	1	2	2	2	1	2	2
Manufacturing	4	9	11	11	14	15	12	12	11
Construction, building services, engineering and planning	9	10	10	9	9	9	9	9	9
Wholesale and retail trade	12	14	14	14	14	16	16	16	15
Transportation and storage	5	5	5	4	5	6	5	5	4
Hospitality, tourism and sport	8	7	6	7	7	7	7	7	7
Information and communication technologies	3	4	3	3	2	2	2	2	2
Creative media and entertainment	8	4	3	3	2	2	2	2	2
Financial, insurance & other professional services	13	8	8	6	6	5	6	6	4
Real estate and facilities management	5	4	3	4	3	3	3	4	3
Government services	8	8	7	7	7	7	8	8	9
Education	10	11	11	11	11	11	11	10	11
Health	6	7	6	7	7	7	8	8	8
Care	5	5	5	6	6	5	6	6	8
Whole Economy	100	100	100	100	100	100	100	100	100
<i>Weighted base</i>	3,726	4,147	2,779	2,515	2,413	2,099	2,382	3,126	1,145
<i>Unweighted bases</i>	18.925	26.614	18.998	17.015	16.534	15.044	17.467	22.418	8.486

Source: Labour Force Survey 2010, ONS

A study carried out by NESTA to map the UK's creative clusters showed that London is the heart of the Creative Industries in Britain, dominating in almost all creative sectors, and particularly in the most intrinsically creative layers of the value chain for each sector. The high level of geographical detail used in the mapping allowed nine other creative hotspots across Britain to be pin-pointed. They are Bath, Brighton, Bristol, Cambridge, Guildford, Edinburgh, Manchester, Oxford and Wycombe-Slough (Chapain *et al.*, 2010).

In recent years, there have been some major endeavours and interventions to redistribute some sectors more evenly throughout the UK. This is illustrated most clearly in the relocation of large segments of the BBC's workforce, mainly from London, to Salford Quays in the North West of England and a corresponding decrease in West London.

2.8 Changes in employment patterns

Despite growth in the number of Creative Media and Entertainment establishments reported in the previous section, the overall size of the workforce has actually decreased between 2002 and 2010. Table 17 shows that the fall in employment actually occurred between 2008 and 2009, in line with the start of the recession. There has been slight growth in employment in the sector between 2009 and 2010, but employment levels still remain significantly lower than between 2002 and 2008.

The overall decline in employment in the Creative Media and Entertainment sector is also apparent throughout all four UK nations (see Table 19).

This apparent contraction in terms of workforce size needs to be considered in light of an ever changing sector structure. For example, two factors may be an increasing reliance on freelance workers (see section 3.2 for further discussion of this issue) and an increasing amount of work being outsourced within the sector.

Table 17: Total employment by sector 2002-2010 (UK) ('000s)

	2002	2003	2004	2005	2006	2007	2008	2009	2010
	000s								
Agriculture, forestry and fishing	394	389	396	421	417	422	448	364	406
Energy production and utilities	434	389	407	422	436	479	486	483	473
Manufacturing	4,153	3,870	3,687	3,615	3,562	3,575	3,368	2,915	2,970
Construction, building services, engineering and planning	2,223	2,333	2,434	2,500	2,560	2,615	2,639	2,875	2,697
Wholesale and retail trade	4,368	4,545	4,536	4,489	4,404	4,349	4,446	4,143	4,140
Transportation and storage	1,486	1,485	1,461	1,511	1,501	1,490	1,517	1,489	1,448
Hospitality, tourism and sport	1,718	1,720	1,730	1,714	1,773	1,807	1,799	1,991	2,046
Information and communication technologies	813	813	839	832	835	851	871	784	761
Creative media and entertainment	1,102	1,139	1,108	1,111	1,138	1,142	1,156	975	987
Financial, insurance & other professional services	1,671	1,662	1,623	1,677	1,696	1,744	1,736	2,038	2,001
Real estate and facilities management	898	869	924	946	984	1,036	1,028	948	978
Government services	2,115	2,166	2,194	2,251	2,282	2,285	2,323	2,265	2,209
Education	2,295	2,414	2,543	2,580	2,642	2,636	2,664	2,939	3,088
Health	1,811	1,881	1,980	2,048	2,079	2,033	2,118	2,038	2,087
Care	1,288	1,338	1,408	1,456	1,479	1,446	1,506	1,721	1,729
Whole Economy	27,908	28,172	28,456	28,740	28,987	29,164	29,382	28,811	28,855
<i>Unweighted base</i>	<i>247.273</i>	<i>238.005</i>	<i>230.951</i>	<i>227.794</i>	<i>222.196</i>	<i>221.046</i>	<i>217.000</i>	<i>203.221</i>	<i>194.448</i>

Source: Labour Force Survey 2010, ONS

Table 18: Creative Media and Entertainment employment by nation 2002-2010 ('000s)

	2002	2003	2004	2005	2006	2007	2008	2009	2010
England	961	991	962	972	998	1,002	1,006	874	876
Scotland	83	86	87	82	83	82	88	60	65
Wales	41	44	43	38	37	40	42	29	32
Northern Ireland	17	17	16	19	20	19	19	12	14

Source: Labour Force Survey 2010, ONS

3 The workforce

Chapter Summary¹¹

The occupational structure of the Creative Media and Entertainment workforce is unique. Nearly half of the workforce are in associate professional and technical roles (45 per cent, compared to 19 per cent in the wider UK economy). These are occupations that require a high level of skilling. Associate professional and technical roles have grown in the past decade (such roles made up 29 per cent of all sector jobs in 2002).

Those working as 'photographic and audio-visual equipment operators', 'journalists, newspaper and periodicals editors', 'broadcasting associate professionals' and 'graphic designers' each make up five per cent of the workforce. The top 15 ranked occupations account for half of the workforce, with a huge variety of other occupations represented in the remaining half.

The 17 VFX roles appearing on the Migration Advisory Committee's shortage occupation list are nevertheless essential core roles.

75 per cent of the workforce is employed full-time, although this is considerably lower in 'libraries, archives and museums' and 'creative arts and entertainment'.

31 per cent of the workforce are self-employed, compared to just 14 per cent within the wider UK economy workforce. Sub-sectors have varying degrees of freelance or self-employed workers, many very high such as film production.

Women are underrepresented in the sector, making up 43 per cent of the workforce (compared to 46 per cent across the wider economy). Representation is dropping in some sub-sectors e.g. 5,000 women left the TV industry between 2006 and 2009 compared to just 750 men. Representation of older women is particularly low, in part due to the difficulties of balancing a family with uncertain and long hours.

A lower proportion of the Creative Media and Entertainment workforce are aged under 25 (10 per cent, compared to 13 per cent in the wider economy), reflecting the highly qualified profile of many of those working in the sector and hence a slightly higher entry age for many.

BAMEs are also underrepresented in the sector (seven per cent, compared to nine per cent in the wider UK economy). This has however been steadily increasing since 2002.

¹¹ NB: Figures from official data sources (e.g. Labour Force Survey and Employer Skills Surveys) prevent analysis of key segments of the Creative Media and Entertainment sector. For further information on this see section 1.4.

3.1 The jobs people do

The Creative Media and Entertainment sector is reliant on a wide range of occupations from those that are creative and technical such as construction, set crafts, and visual effects, through to management and business roles, all of which benefit from applied sector specific knowledge.

3.2 Occupational structure

The occupational structure of the Creative Media and Entertainment workforce is very different to the wider economy. Approaching half (45 per cent) of the Creative Media and Entertainment workforce are employed in associate professional and technical roles, compared to just 15 per cent of the wider UK economy workforce. These are highly skilled roles (see Table 45 later in this report) and hence this indicates the specialist nature of work in the sector. A further fifth (19 per cent) of the Creative Media and Entertainment workforce are managers and senior officials (again higher than the UK economy average), with around one in ten working in each of administrative and secretarial roles and professional occupations. Table 20 provides a full breakdown of both the Creative Media and Entertainment workforce (please see Table 22 to how these relate to occupations within the CME sector).

Table 20: Employment by occupation and sector, 2010 (UK)

	Creative media and entertainment		All economy	
	000s	%	000s	%
Managers and Senior Officials	187	19	4,455	15
Professional Occupations	93	9	4,028	14
Associate Professional and Technical	444	45	4,265	15
Administrative and Secretarial	109	11	3,181	11
Skilled Trades Occupations	50	5	3,061	11
Personal Service Occupations	9	1	2,544	9
Sales and Customer Service Occupations	32	3	2,146	7
Process, Plant and Machine Operatives	11	1	1,907	7
Elementary Occupations	50	5	3,257	11
All occupations	986	100	28,842	100
<i>Unweighted base</i>	<i>6.188</i>		<i>194.372</i>	

Source: Labour Force Survey 2010, ONS

Within the Creative Media and Entertainment sector there are variations by sub-sector. Compared to the wider sector profile presented in Table 20 above, the 'creative arts and entertainment' sector is made up of a very high proportion of associate professional and technical roles (73 per cent). The same applies to the 'programming and broadcasting'

sector (60 per cent). Manager and senior official roles are the most common within the 'advertising and market research' sector (34 per cent), whilst administrative and secretarial roles are the most common within the 'libraries, archives, and museums' sector (28 per cent).¹²

SSC data which measures sector employment by industry specified roles supports this technical concentration in sector roles. For example, Creative Skillset's (2009) Employment Census measured an increase in the proportion of individuals working in 'production' specific roles which make up a significant proportion of all roles in the television and radio sectors (aligned with programming and broadcasting), while research conducted by Creative & Cultural Skills (which includes a broader definition of the sector presented here) suggests that as much as 60 per cent of the workforce are involved in associate professional and technical roles (Creative & Cultural Skills, 2010).

The occupational structure of the Creative Media and Entertainment workforce has seen some changes since 2002, particularly the growth of associate professional and technical roles (such roles made up 29 per cent of all sector jobs in 2002, rising to 45 per cent in 2010). Other occupations either remained fairly consistent or had fallen in terms of the proportion of all jobs in the sector between 2002 and 2010.¹³

The occupational structure of the whole economy workforce within the UK does not vary to a great degree. As shown in Table 21 the greatest variation concerns Northern Ireland, where the workforce are more likely to be concentrated in skilled trades and administrative and secretarial roles than in other nations.

Data for the Creative Media and Entertainment sector cannot be presented in full in this report due to suppression criteria placed on outputs. However, there is evidence that the workforce in Wales (51 per cent) and Northern Ireland (50 per cent) is more likely to comprise associate professional and technical roles than in England (45 per cent) and Scotland (41 per cent). The England based workforce (20 per cent) has a higher proportion of managers and senior officials than the other home nations.

12 Labour Force Survey 2010, ONS

13 Labour Force Survey 2010, ONS

Table 21: Employment by occupation and nation, 2010 (UK - whole economy)

	UK		England		Scotland		Wales		Northern Ireland	
	000s	%	000s	%	000s	%	000s	%	000s	%
Managers and Senior Officials	4,455	15	3,866	16	331	14	173	13	85	11
Professional Occupations	4,028	14	3,454	14	299	12	176	13	100	13
Associate Professional and Technical	4,265	15	3,638	15	353	14	186	14	88	12
Administrative and Secretarial	3,181	11	2,670	11	270	11	135	10	106	14
Skilled Trades Occupations	3,061	11	2,502	10	285	12	149	11	125	16
Personal Service Occupations	2,544	9	2,123	9	226	9	131	10	64	8
Sales and Customer Service Occupations	2,146	7	1,772	7	209	9	111	8	54	7
Process, Plant and Machine Operatives	1,907	7	1,570	6	174	7	99	8	63	8
Elementary Occupations	3,257	11	2,724	11	300	12	153	12	81	11
All occupations	28,842	100	24,319	100	2,446	100	1,311	100	765	100
<i>Unweighted base</i>	<i>194.372</i>		<i>161.438</i>		<i>17.020</i>		<i>8.690</i>		<i>7.224</i>	

Source: Labour Force Survey 2010, ONS

3.3 Core jobs that are prevalent within sector

The largest occupations (based on standard occupational classification) in the Creative Media and Entertainment sector in 2010 are listed in Table 22. No single occupational group makes up a majority of the workforce but those working as 'photographic and audio-visual equipment operators', 'journalists, newspaper and periodicals editors', 'broadcasting associate professionals' and 'graphic designers' all make up five per cent of the workforce. The top 15 ranked occupations are listed but this only accounts for half of the workforce (the remaining half falling into other occupations).

Table 22: Largest occupational groups within the Creative Media and Entertainment sector, UK (2010)

Rank	Occupation	000s	% workforce
1	3434 Photo. & audio-visual equip operators	50	5
2	3431 Journalists, newspaper & period editors	49	5
3	3432 Broadcasting associate professionals	46	5
4	3421 Graphic designers	46	5
5	1132 Marketing and sales managers	40	4
6	3412 Authors, writers	38	4
7	1239 Managers and prop. in other services NEC	33	3
8	3411 Artists	33	3
9	3422 Product, clothing & related designers	28	3
10	3416 Arts officers, producers and directors	26	3
11	4150 General office assistants or clerks	22	2
12	3415 Musicians	22	2
13	1134 Advertising & public relations managers	22	2
14	4135 Library assistants & clerks	20	2
15	3413 Actors, entertainers	20	2
	Other occupations	490	50
	<i>Total workforce</i>	986	100
	<i>Unweighted base (000s)</i>	6.188	

Source: Labour Force Survey 2010, ONS

The profile of the wider UK economy workforce is rather different, with a very different group of occupations forming the highest proportion of the total workforce (see Table 23).

Table 23: Largest occupational groups within whole economy, UK (2010)

Rank	Occupation	000s	% workforce
1	7111 Sales and retail assistants	1,233	4
2	6115 Care assistants and home carers	741	3
3	4150 General office assistants or clerks	656	2
4	9233 Cleaners, domestics	588	2
5	1132 Marketing and sales managers	532	2
6	4122 Accounts wages clerk, bookkeeper	523	2
7	6124 Educational assistants	513	2
8	3211 Nurses	509	2
9	2314 Secondary education teaching profs	445	2
10	2315 Prim & nursery education teaching profs	432	1
11	1121 Prod. works & maintenance managers	414	1
12	9223 Kitchen and catering assistants	411	1
13	1163 Retail and wholesale managers	394	1
14	9149 Other good handling & storage occup nec	382	1
15	2132 Software professionals	327	1
	Other occupations	20742	72
	<i>Total workforce</i>	28,842	100
	<i>Unweighted base (000s)</i>	194.372	

Source: Labour Force Survey 2010, ONS

A number of occupations worthy of note are those appearing on the Migration Advisory Committee shortage occupation list (Migration Advisory Committee, 2011). The following 17 VFX roles appear on the list across four SOC codes, hence should additionally be considered as core jobs within the Creative Media and Entertainment sector.

Table 24: Creative Media and Entertainment associated occupations on the MAC shortage list.

SOC	Job title
Software professionals SOC 2132	Software developer, systems engineer and shader writer
Artists SOC 3411	Animator
Arts officers, producers and directors SOC 3416	2D supervisor, 3D supervisor, computer graphics supervisor, producer, production manager, technical director and visual effects supervisor
Graphic designers SOC 3421	Compositing artist, matte painter, modeller, rigger, stereo artist and texture artist

Source: Migration Advisory Committee (2011)

Also prevalent on the Migration Advisory Committee shortage occupation list more generally are:

- Dancers and choreographers (specifically skilled classical ballet dancers, skilled contemporary dancers)
- Musicians (specifically skilled orchestral musicians).

3.4 Working patterns

3.5 Full and part-time employment

Three-quarters (75 per cent) of the Creative Media and Entertainment workforce are employed full-time, which is just slightly higher than the average across the UK economy workforce (73 per cent). This varies slightly by nation within the Creative Media and Entertainment sector, with England (75 per cent) having the highest proportion of full-time workers. Northern Ireland (72 per cent), Scotland (70 per cent) and Wales (68 per cent) all have slightly lower proportions of full-time workers in the sector (see Table 25). The remaining 25 per cent of the Creative Media and Entertainment workforce are employed part-time. A breakdown of other sectors is also available in Tables 25 and 26.

Table 25: Working hours by sector, 2010 (UK)

	Full-time	Part-time	Full-time	Part-time	Weighted base	Unweighted base
	000s	000s	%	%	000s	000s
Agriculture, forestry and fishing	326	79	80	19	406	2.976
Energy production and utilities	435	38	92	8	473	3.244
Manufacturing	2,688	281	91	9	2,969	20.400
Construction, building services, engineering and planning	2,435	260	90	11	2,695	17.917
Wholesale and retail trade	2,549	1,590	62	39	4,139	27.571
Transportation and storage	1,218	229	84	16	1,447	9.729
Hospitality, tourism and sport	1,127	920	55	44	2,046	13.183
Information and communication technologies	682	79	90	10	761	4.875
Creative media and entertainment	737	249	75	25	986	6.186
Financial, insurance & other professional services	1,623	377	81	18	2,001	12.804
Real estate and facilities management	643	334	66	35	977	6.561
Government services	1,800	408	82	19	2,208	15.098
Education	1,872	1,215	61	40	3,087	21.537
Health	1,344	742	64	34	2,086	14.742
Care	1,056	672	61	37	1,728	12.001
All economy	21,083	7,760	73	27	28,843	194.363

Source: Labour Force Survey 2010, NS

Table 26: Working hours by sector and nation, 2010 (%)

	England				Scotland				Wales				Northern Ireland			
	Full-time %	Part-time %	Weighted base 000s	Unweighted base 000s	Full-time %	Part-time %	Weighted base 000s	Unweighted base 000s	Full-time %	Part-time %	Weighted base 000s	Unweighted base 000s	Full-time %	Part-time %	Weighted base 000s	Unweighted base 000s
Agriculture, forestry and fishing	79	21	296	2.112	83	17	51	0.385	85	*	31	0.198	88	*	27	0.281
Energy production and utilities	92	8	346	2.336	91	9	88	0.620	96	*	25	0.157	92	*	14	0.131
Manufacturing	90	10	2,541	17.233	92	8	199	1.431	93	7	138	0.905	93	*	91	0.831
Construction, building services,	90	10	2,268	14.834	93	7	244	1.702	93	7	112	0.717	93	*	71	0.664
Wholesale and retail trade	62	38	3,469	22.822	58	42	352	2.369	57	42	205	1.325	63	37	112	1.055
Transportation and storage	84	16	1,251	8.292	83	17	117	0.822	80	23	46	0.308	87	*	33	0.307
Hospitality, tourism and sport	55	45	1,704	10.849	52	48	198	1.295	51	49	100	0.636	62	38	44	0.403
Information and communication technologies	90	10	675	4.269	89	11	56	0.377	88	*	18	0.114	88	*	13	0.115
Creative media and entertainment	75	25	875	5.406	68	32	64	0.436	70	23	32	0.214	72	*	14	0.130
Financial, insurance & other professional services	82	18	1,768	11.123	78	22	138	0.948	77	22	53	0.358	81	19	41	0.375
Real estate and facilities management	65	35	847	5.623	73	27	75	0.519	63	35	38	0.254	74	*	18	0.165
Government services	81	19	1,835	12.302	84	16	173	1.210	81	23	111	0.744	84	16	89	0.842
Education	60	40	2,624	18.075	64	36	234	1.677	66	32	154	1.059	67	33	75	0.726
Health	64	36	1,712	11.931	65	35	198	1.409	67	31	111	0.771	71	29	64	0.631
Care	61	39	1,409	9.629	60	40	183	1.308	61	40	97	0.665	62	38	40	0.399
All economy	73	27	24,321	161.435	73	27	2,444	17.008	72	27	1,311	8.689	77	23	766	7.231

Source: Labour Force Survey 2010, ONS

* Sample size too small for reliable estimate

In the past decade there has been little change in the proportion of full-time workers in the Creative Media and Entertainment sector. In 2002, 74 per cent of the workforce were employed on a full-time basis, which has fluctuated around this level before peaking at 75 per cent in 2010.¹⁴

¹⁴ Labour Force Survey 2002-2010, ONS

As Table 27 shows there is substantial variation within Creative Media and Entertainment sub-sectors. The proportion of full-time workers is highest in 'programming and broadcasting' (86 per cent) and 'publishing' (80 per cent). It is much lower in 'libraries, archives and museums' (55 per cent) and 'creative arts and entertainment' (67 per cent).

Table 27: Working hours by Creative Media and Entertainment 2-digit SIC (2010)

SIC07 codes	Description	Full-time	Part-time	Full-time	Part-time
		000s	000s	%	%
58	Publishing	159	39	80	20
59	Motion Pictures	71	20	78	22
60	Programming and broadcasting	47	7	86	14
73	Advertising and market research	118	32	79	21
74	Other professional scientific and technical activities	179	52	78	22
90	Creative arts and entertainment	103	50	67	33
91	Libraries, archives, museums	60	50	55	45

Source: Labour Force Survey 2010, ONS

3.6 Self-employment

Three in ten (31 per cent) of the Creative Media and Entertainment workforce are self-employed, which is considerably higher than the wider UK economy workforce where 14 per cent are self-employed. A breakdown of other sectors is also available in Table 28.

Labour Force Survey data shows that there is a great deal of variation in employment status within Creative Media and Entertainment sub-sectors. The proportion of self-employed workers is low in 'libraries, archives and museums' and 'publishing'. The proportion of self-employed workers is higher in 'creative arts and entertainment'. This is due to the type and composition of work undertaken within these sectors. Whilst the economies of scale and nature of the libraries, archives and museums and publishing sectors, require larger numbers of people and therefore impractical for self-employment, (as illustrated in the establishment level data). In contrast, creative arts and entertainment roles are both accessible for pursuing self-employment, with their services requested on an "as and when" basis. This leads to the situation within this sector where there is a reliance on flexible employment to help bridge workforce requirements, with freelancing occupations undertaken on a contract and project basis.¹⁵

¹⁵Labour Force Survey 2010, ONS

The concept of 'freelancers' is a critical one within many Creative Media and Entertainment sub-sectors where work is undertaken on a project or contract basis.¹⁶ Many sectors are characterised by high levels of freelancing, especially those areas most closely involved in the production process, for example Film Production (89 per cent), Visual Arts (88 per cent), Independent Production for Radio (61 per cent), Photo Imaging (67 per cent), Literature (64 per cent), Performing Arts (55 per cent), Corporate Production (54 per cent), Animation (46 per cent), Independent Production for TV (44 per cent), Design (40 per cent) and Music (40 per cent).¹⁷ The freelance workforce is critical to the sector bearing in mind the reliance on their skills by the sector and issues relating to provision of learning and skills development to this group (which is discussed later in this report in section 4.2.2).

¹⁶ A freelancer is conventionally described as a skilled professional worker who is neither an employer nor employee, supplying labour on a temporary basis under a contract for services for a fee to a range of business clients. Skillset defines a freelancer as someone on a contract of less than 365 days.

¹⁷ Sources (see bibliography): Skillset 2009; Skillset 2010b; and Creative & Cultural Skills 2010.

Table 28: Employment status by sector, UK, 2010 ('000s)

	Employee	Self-employed	Employee	Self-employed	Weighted base	Unweighted base
	000s	000s	%	%	000s	000s
Agriculture, forestry and fishing	189	202	47	50	405	2.973
Energy production and utilities	446	25	95	5	472	3.240
Manufacturing	2,776	184	94	6	2,968	20.397
Construction, building services, engineering and planning	1,716	964	64	36	2,692	17.897
Wholesale and retail trade	3,731	390	90	9	4,133	27.534
Transportation and storage	1,194	250	83	17	1,447	9.729
Hospitality, tourism and sport	1,817	219	89	11	2,044	13.168
Information and communication technologies	635	124	84	16	761	4.871
Creative media and entertainment	672	310	68	31	987	6.191
Financial, insurance & other professional services	1,706	291	85	15	2,001	12.804
Real estate and facilities management	744	229	76	23	977	6.561
Government services	2,145	58	97	3	2,207	15.091
Education	2,891	188	94	6	3,082	21.507
Health	1,928	155	92	7	2,085	14.740
Care	1,577	140	92	8	1,723	11.971
All economy	24,774	3,952	86	14	28,817	194.200

Source: Labour Force Survey 2010, ONS

* Sample size too small for reliable estimate.

Weighted & unweighted bases also include unpaid family workers

The proportion of employees varies slightly by nation within the Creative Media and Entertainment sector, with Scotland (76 per cent) and Northern Ireland (75 per cent) having the highest proportion of employees. England (68 per cent) and Wales (60 per cent) have lower proportions of employees in the sector. These variations are likely to be related to the types of sector and sub-sector prevalent within each nation, for example in Scotland the proportion of the overall workforce employed in Publishing is higher than in other Nations and this is a sector with a lower proportion of self-employed workers. A breakdown of other sectors is also available in Table 29.

Table 29: Employment status by sector and nation, 2010 (%)

	England				Scotland				Wales				Northern Ireland			
	Employee %	Self- employed %	Weighted base 000s	Unweighted base 000s	Employee %	Self- employed %	Weighted base 000s	Unweighted base 000s	Employee %	Self- employed %	Weighted base 000s	Unweighted base 000s	Employee %	Self- employed %	Weighted base 000s	Unweighted base 000s
Agriculture, forestry and fishing	50	46	295	2.110	49	50	51	0.385	33	62	31	0.197	*	75	27	0.281
Energy production and utilities	94	6	346	2.334	95	*	87	0.619	99	*	25	0.157	95	*	14	0.130
Manufacturing	93	6	2,540	17.229	95	5	199	1.432	94	6	138	0.905	93	7	91	0.831
Construction, building services, engineering and planning	63	37	2,266	14.822	77	23	244	1.701	65	35	112	0.717	55	45	70	0.657
Wholesale and retail trade	91	9	3,466	22.800	91	9	351	2.359	86	14	204	1.323	84	16	112	1.052
Transportation and storage	83	17	1,252	8.294	85	15	117	0.820	76	23	46	0.308	77	23	33	0.307
Hospitality, tourism and sport	89	10	1,702	10.836	89	11	198	1.295	87	12	100	0.634	82	17	44	0.403
Information and communication technologies	84	16	674	4.266	82	18	56	0.377	77	*	18	0.113	87	*	13	0.115
Creative media and entertainment	68	32	875	5.409	76	24	65	0.438	60	39	32	0.214	75	*	14	0.130
Financial, insurance & other professional services	85	15	1,768	11.122	90	10	138	0.948	81	19	53	0.359	92	*	41	0.375
Real estate and facilities management	75	24	847	5.624	85	15	75	0.520	78	21	37	0.252	67	*	18	0.165
Government services	97	3	1,834	12.298	97	3	173	1.209	97	*	111	0.742	99	*	89	0.842
Education	94	6	2,619	18.049	95	5	234	1.676	96	4	153	1.056	95	*	75	0.726
Health	92	8	1,712	11.930	94	6	199	1.410	92	8	111	0.769	95	*	64	0.631
Care	91	9	1,404	9.601	93	6	183	1.306	95	*	97	0.665	90	*	40	0.399
All economy	86	14	24,301	161.314	89	11	2,442	16.995	85	14	1,309	8.674	84	16	765	7.217

Source: Labour Force Survey 2010, ONS

* Sample size too small for reliable estimate

Weighted & unweighted bases also include unpaid family workers

More recent data for the Creative Media and Entertainment sector shows a marked change from 2002-2008 when around eight in ten members of the workforce were employees. Since the start of the recession, data for 2009 (69 per cent) and 2010 (68 per cent), shows a lower proportion of employees within the workforce. This is of course offset by an increase in the proportion of the workforce who are self-employed.¹⁸

This trend corresponds with SSC evidence that sector reliance on freelancers continues to increase. It stands to reason that redundancies as a result of the recession over the past few years would lead to an increase in individuals seeking self-employment or freelance work. However, Creative Skillset research also identifies a continuing trend of increased freelance usage, finding that 24 per cent of employers believed their company's requirement for freelancers would increase over the next 12 months and 65 per cent believed it would stay the same. Just a minority felt it would decrease (Creative Skillset, 2010a). A forthcoming increase in the scale of freelance work is also identified by members of the workforce. Further, Creative Skillset research asked the entire workforce whether they were planning any career changes in the next 12 months. Overall, 27 per cent said they were going to broaden the scope of their freelance work and a further nine per cent said they were going to become freelance (Creative Skillset, 2010b). An example of why this may be the case is within the film sector, where the economic climate has led to companies reducing their permanently employed in-house divisions and out-sourcing work on a contract basis, whilst the re-organisation of the BBC has left many moving from permanent employment into freelance work within TV.

The Creative Media and Entertainment workforce is made up primarily of permanent workers (92 per cent), however this is lower than most other sectors in the UK (see Table 30). This overall pattern has also remained relatively unchanged since 2002.¹⁹ Data suggests that the 'creative arts and entertainment' and 'motion pictures' sectors are the main contributors to this overall figure as they both have a higher than average proportion of temporary workers.²⁰ This again reinforces the project based nature of work in these sectors with employees hired when required.

18 Labour Force Survey 2002-2010, ONS

19 Ibid

20 Ibid

Table 30: Permanent and temporary employees by sector, UK, 2010 ('000s and %)

	Permanent	Temporary	Permanent	Temporary	Weighted base	Unweighted base
	000s	000s	%	%	000s	000s
Agriculture, forestry and fishing	181	8	96	4	189	1.306
Energy production and utilities	430	16	96	4	446	3.060
Manufacturing	2652	123	96	4	2775	18.984
Construction, building services, engineering and planning	1648	66	96	4	1714	11.317
Wholesale and retail trade	3573	156	96	4	3728	24.614
Transportation and storage	1132	62	95	5	1194	7.970
Hospitality, tourism and sport	1631	183	90	10	1814	11.563
Information and communication technologies	612	22	97	3	635	4.048
Creative media and entertainment	615	56	92	8	671	4.181
Financial, insurance & other professional services	1651	55	97	3	1706	10.835
Real estate and facilities management	704	39	95	5	743	4.957
Government services	2028	117	95	5	2145	14.642
Education	2563	327	89	11	2890	20.195
Health	1825	103	95	5	1928	13.639
Care	1474	103	93	7	1576	10.953
All economy	23247	1513	94	6	24760	166.200

Source: Labour Force Survey 2010, ONS

3.7 Workforce characteristics

3.7.1 Gender

Across the UK, 43 per cent of the Creative Media and Entertainment sector are female. This is lower than the proportion of women in the wider economy workforce (46 per cent), hence women are under-represented in the sector. There is slight variation by nation, with the Creative Media and Entertainment workforce in Northern Ireland (48 per cent) and Scotland (47 per cent) comprising a higher proportion of women, whereas Wales (38 per cent) has a lower proportion (see Tables 31 and 32). These trends are likely to be linked to the sectors and sub-sectors prevalent within each nation

Table 31: Employment by gender and nation, Creative Media and Entertainment (2010)

	Male	Female	Total	Male	Female	Total	Unweighted base
	000s	000s	000s	%	%	%	000s
UK	561	426	987	57	43	100	6.193
England	499	376	876	57	43	100	5.411
Scotland	34	30	65	53	47	100	0.438
Wales	20	12	32	62	38	100	0.214
Northern Ireland	8	7	14	52	48	100	0.13

Source: Labour Force Survey 2010, ONS

Table 32: Employment by gender and nation, whole economy (2010)

	Male	Female	Total	Male	Female	Total	Unweighted base
	000s	000s	000s	%	%	%	000s
UK	15,439	13,416	28,855	54	46	100	194.448
England	13,081	11,250	24,331	54	46	100	161.501
Scotland	1,257	1,189	2,446	51	49	100	17.022
Wales	692	620	1,312	53	47	100	8.693
Northern Ireland	409	358	766	53	47	100	7.232

Source: Labour Force Survey 2010, ONS

Levels of female representation also vary by Creative Media and Entertainment sub-sector (see Table 33). The relative proportion of women in the 'libraries, archives and museums' sector is higher than average. However, women are less well represented in the 'programming and broadcasting' and 'motion pictures' sectors. Creative Skillset research has found that in these sectors where working hours can be very flexible and irregular due to the nature of the work undertaken, their suitability to women, especially for older women with family responsibilities, this pattern of working is inappropriate for their social circumstances and explains in part this finding.

Table 33: Employment by gender, Creative Media and Entertainment 2-digit SIC (2010)

SIC07 codes	Description	Male	Female	Total
		000s	000s	000s
58	Publishing	110	88	198
59	Motion Pictures	63	28	91
60	Programming and broadcasting	39	15	54
73	Advertising and market research	81	69	150
74	Other professional scientific and technical activities	141	90	231
90	Creative arts and entertainment	86	68	154
91	Libraries, archives, museums	42	68	110

Source: Labour Force Survey 2010, ONS

In addition to the sector variation, levels of female representation also vary by occupation as shown in Table 34. The Creative Media and Entertainment sector mirrors the wider UK economy with higher than average proportions of women in 'administrative and secretarial', 'personal service' and 'sales and customer service' occupations.

Table 34: Gender profile by broad occupational group (UK)

	Creative media and entertainment			All economy		
	Male	Female	Total	Male	Female	Total
	%	%	000s	%	%	000s
1 Managers and Senior Officials	65	35	187	65	35	4,455
2 Professional Occupations	66	34	93	56	44	4,028
3 Associate Professional and Technical	59	41	444	50	50	4,265
4 Administrative and Secretarial	24	76	109	22	78	3,181
5 Skilled Trades Occupations	82	18	50	92	8	3,061
6 Personal Service Occupations	*	71	9	17	83	2,544
7 Sales and Customer Service Occupations	36	64	32	35	65	2,146
8 Process, Plant and Machine Operatives	82	*	11	88	12	1,907
9 Elementary Occupations	53	47	50	55	45	3,257
All Occupations	57	43	986	54	46	28,842

Source: Labour Force Survey 2010, ONS

* Sample size too small for reliable estimate

At a sector wide level there has been very little movement in the proportion of women employed within both the Creative Media and Entertainment sector and the wider UK economy since 2002.²¹

²¹ Labour Force Survey 2002-2010, ONS

However, Creative Skillset's Employment Census research scoping the size and shape of the Creative Media industries shows that representation is dropping overall and sharply in some sub-sectors such as independent production for TV, animation and interactive content design. The TV industry provides compelling evidence regarding the changes in female representation where nearly 5,000 women left the industry between 2006 and 2009, compared with just 750 men. The number of women in permanent employment has fallen by 12 per cent, compared with a two per cent overall decline (Creative Skillset, 2009 and Creative Skillset, 2006).

Research commissioned by The Cultural Leadership Programmes shows that over the last 25 years fewer and fewer new creative and cultural businesses have started with a mixed management team, the report, Women in Leadership suggests that

Based on current trends, the sector is progressing towards a situation where less than two per cent of businesses are managed by teams of men and women working together. Unless this trend is reversed it will become increasingly important for women and men to develop skills in both transactional and transformational leadership styles. (Cultural Leadership Programme, 2008, p. 7).

Creative Skillset research has also repeatedly shown that representation of older women is extremely low and has identified the cause of this to be the particular challenges of balancing starting and raising a family with working in the Creative Media Industries. Many women have reported the demands of combining a freelance career as a crew member with raising a family as especially onerous due to uncertain and long hours, unpredictable timing of contracts and so forth (Creative Skillset, 2010c).

3.8 Age

There are only slight differences in the age profiles of the Creative Media and Entertainment sector and the wider UK economy workforce. As shown in Tables 35 and 36 (bearing in mind the more detailed age bands in the latter) a very similar proportion of the workforce are aged under 35 and also in the 60 and over age group. Subtle variations do exist, for example a lower proportion of the Creative Media and Entertainment workforce are aged under 25, reflecting the highly qualified profile of many of those working in the sector and hence a slightly higher entry age for many.

The Creative Media and Entertainment workforce in Northern Ireland is largely concentrated in the 25-59 age band, with far fewer younger or older workers when compared to other nations. Wales has the highest proportion of workers aged 60 or over in the sector, but like Northern Ireland has a slightly lower proportion aged under 25 (see Table 35). The workforce age profile in Scotland and England is broadly similar to the UK. Comparative data for the UK is given in Table 36.

Table 35: Age profile of Creative Media and Entertainment workforce by nation (2010)

	UK		England		Scotland		Wales		Northern Ireland	
	000s	%	000s	%	000s	%	000s	%	000s	%
Under 25	94	10	83	10	7	11	2	7	1	6
25-34	243	25	218	25	15	23	7	20	4	25
35-44	270	27	242	28	16	24	7	23	5	35
45-59	281	28	245	28	20	31	12	36	4	29
60+	98	10	87	10	6	10	5	14	1	5
Total	987	100	876	100	65	100	32	100	14	100
<i>Unweighted base</i>	6.193		5.411		0.438		0.214		0.130	

Source: Labour Force Survey 2010, ONS

Table 36: Age profile of whole economy workforce by nation (2010)

	UK		England		Scotland		Wales		Northern Ireland	
	Number	%	Number	%	Number	%	Number	%	Number	%
16-18	673	2	569	2	58	2	35	3	10	1
19-24	3,037	11	2,541	10	274	11	136	10	85	11
25-34	6,324	22	5,365	22	500	20	267	20	192	25
35-44	7,029	24	5,932	24	589	24	311	24	197	26
45-59	9,331	32	7,826	32	834	34	434	33	236	31
60-64	1,631	6	1,394	6	129	5	79	6	30	4
65 +	831	3	702	3	62	3	49	4	17	2
Total	28,855	100	24,331	100	2,446	100	1,312	100	766	100
<i>Unweighted base</i>	194.448		161.501		17.022		8.693		7.232	

Source: Labour Force Survey 2010, ONS

The age profile of the Creative Media and Entertainment sector varies by sub-sector. The 'motion pictures' workforce is the youngest, with a higher proportion aged under 25 and only a small proportion aged 60 and over. The 'advertising and market research' sector is another where the proportion of younger workers is higher than average. Those aged 60 and over are most under-represented in the 'programming and broadcasting' workforce, whilst they make up a higher than average proportion of the 'creative arts and entertainment' and 'libraries, archives and museums' sectors.²²

²² Labour Force Survey 2002-2010, ONS

The age profile of the Creative Media and Entertainment workforce has changed over the past decade, as shown in Table 37. In 2002, 180,000 members of the Creative Media and Entertainment workforce (around 16 per cent) were aged under 25, which remained fairly stable until 2009 when the number of individuals aged under 25 decreased to 101,000 (around 10 per cent of the workforce).

This is in part explained by an increasing proportion of graduates in the sector and hence the average entry age becoming a little higher. The reverse is true of those aged 60 and over, with this group numbering 78,000 (around seven per cent of the workforce) in 2002, which has gradually increased up to 98,000 (around 10 per cent) in 2010.

Both these trends are also apparent across the wider UK economy (see Table 38, noting different age bands).

Table 37: Age profile of Creative Media and Entertainment workforce 2002-2010 (UK)

	2002	2003	2004	2005	2006	2007	2008	2009	2010
	000s	000s	000s	000s	000s	000s	000s	000s	000s
Under 25	180	189	181	185	189	181	188	101	94
25-34	299	298	286	271	276	282	288	258	243
35-44	258	275	268	264	267	273	266	250	270
45-59	287	293	286	304	310	307	311	275	281
60+	78	84	86	87	95	100	103	92	98
Total	1,102	1,139	1,108	1,111	1,138	1,142	1,156	975	987
<i>Unweighted base</i>	<i>9.42</i>	<i>9.252</i>	<i>8.718</i>	<i>8.532</i>	<i>8.431</i>	<i>8.322</i>	<i>8.197</i>	<i>6.435</i>	<i>6.193</i>

Source: Labour Force Survey 2010, ONS

Table 38: Age profile of whole economy workforce 2002-2010 (UK)

	2002	2003	2004	2005	2006	2007	2008	2009	2010
	000s								
Under 18	1,078	1,076	1,077	1,028	976	938	925	765	673
19-24	2,948	2,973	3,072	3,097	3,179	3,224	3,221	3,048	3,037
25-34	6,505	6,361	6,279	6,289	6,250	6,242	6,279	6,186	6,324
35-44	7,317	7,416	7,490	7,525	7,533	7,528	7,442	7,241	7,029
45-59	8,474	8,638	8,748	8,915	9,017	9,046	9,171	9,182	9,331
60-64	1,107	1,186	1,252	1,306	1,405	1,545	1,652	1,650	1,631
65 +	479	522	538	580	625	641	693	739	831
Total	27,908	28,172	28,456	28,740	28,987	29,164	29,382	28,811	28,855
<i>Unweighted base</i>	<i>247.273</i>	<i>238.005</i>	<i>230.951</i>	<i>227.794</i>	<i>222.196</i>	<i>221.046</i>	<i>217.000</i>	<i>203.221</i>	<i>194.448</i>

Source: Labour Force Survey 2010, ONS

3.9 Ethnicity

Across the UK, seven per cent of the Creative Media and Entertainment sector are Black Asian and Minority Ethnic (BAME). This is lower than the proportion of BAMEs in the wider UK economy (nine per cent). As can be seen in Table 39 there is significant variation by sector.

This report has already shown that the sector has a high concentration in London, where the wider economy workforce comprises a much higher proportion of BAMEs. This adds to the argument that BAMEs are underrepresented within the sector.

Table 39: Ethnicity of workforce within sectors, UK (2010)

	White	BAME	Total	White	BAME	Total
	000s	000s	000s	%	%	%
Agriculture, forestry and fishing	402	*	402	100	*	100
Energy production and utilities	453	20	472	96	4	100
Manufacturing	2,769	199	2,968	93	7	100
Construction, building services, engineering and planning	2,567	130	2,697	95	5	100
Wholesale and retail trade	3,722	416	4,139	90	10	100
Transportation and storage	1,266	180	1,445	88	12	100
Hospitality, tourism and sport	1,766	280	2,045	86	14	100
Information and communication technologies	660	100	760	87	13	100
Creative media and entertainment	913	73	986	93	7	100
Financial, insurance & other professional services	1,776	224	2,000	89	11	100
Real estate and facilities management	852	125	977	87	13	100
Government services	2,037	171	2,208	92	8	100
Education	2,875	210	3,085	93	7	100
Health	1,814	272	2,086	87	13	100
Care	1,526	200	1,726	88	12	100
All economy	26,151	2,686	28,837	91	9	100

Source: Labour Force Survey 2010, ONS

* Sample size too small for reliable estimate

Within the Creative Media and Entertainment sector there are indications of variation by sub-sector. Labour Force Survey data cannot be presented in full in this report due to suppression criteria placed on outputs, but the 'programming and broadcasting' and 'advertising and market research' employ higher proportions of BAME workers.²³ As shown in Table 40 there has been a slight improvement in the representation of BAMEs in the wider Creative Media and Entertainment sector since 2002. This mirrors the pattern displayed in the wider economy workforce.

²³ Labour Force Survey 2002-2010, ONS

Table 40: Ethnicity of workforce within Creative Media and Entertainment sector, UK (2002-2010) (number, %)

Year	White	BAME	Total	Unweighted base
2002	95	5	100	3.718
2003	94	6	100	3.606
2004	94	6	100	3.443
2005	94	6	100	3.359
2006	93	7	100	3.298
2007	93	7	100	3.272
2008	93	7	100	3.159
2009	93	7	100	1.243
2010	93	7	100	1.176

Source: Labour Force Survey 2010, ONS

As with the sub-sectoral analysis, nation coverage within the Creative Media and Entertainment sector cannot be presented due to suppression criteria. However, it is likely that the pattern displayed in Table 41 amongst the wider UK economy workforce will also apply, namely that there are a much smaller proportion of BAMEs in the workforce in Scotland, Wales and Northern Ireland. Certainly this assumption proves to be the case for sub-sectors covered by Creative Skillset's and Creative & Cultural Skills' footprint, where just one to two per cent of the workforce in Scotland, Wales and Northern Ireland are found to be BAME (Creative Skillset, 2009 and Creative & Cultural Skills, 2010).

Table 41: Ethnicity of workforce across whole economy, four nations (2010)

	White	BAME	Total	White	BAME	Total	Unweighted base
	000s	000s	000s	%	%	%	000s
UK	26,151	2,686	28,837	91	9	100	194.336
England	21,755	2,558	24,313	89	11	100	161.395
Scotland	2,370	76	2,445	97	3	100	17.019
Wales	1,272	40	1,312	97	3	100	8.691
Northern Ireland	754	12	766	98	2	100	7.231

Source: Labour Force Survey 2010, ONS

Country of birth is another indicator of the diversity of a sector. In total, 86 per cent of the Creative Media and Entertainment sector workforce were born in the UK. A further five per cent were born elsewhere in Europe and the remaining nine per cent elsewhere in the world. As shown in Table 42 this is a very similar profile to the workforce in the wider UK economy.

Table 42: Employment by country of birth and sector, UK (2010)

	UK	Rest of Europe (EU 27)	Rest of world	Total	UK	Rest of Europe (EU 27)	Rest of world	Total
	000s	000s	000s	000s	%	%	%	%
Agriculture, forestry and fishing	377	21	8	406	93	5	2	100
Energy production and utilities	431	15	26	472	91	3	6	100
Manufacturing	2,567	210	193	2,969	86	7	6	100
Construction, building services, engineering and planning	2,446	124	126	2,696	91	5	5	100
Wholesale and retail trade	3,644	177	318	4,140	88	4	8	100
Transportation and storage	1,213	77	158	1,448	84	5	11	100
Hospitality, tourism and sport	1,630	156	260	2,046	80	8	13	100
Information and communication technologies	640	33	88	761	84	4	12	100
Creative media and entertainment	850	51	87	987	86	5	9	100
Financial, insurance & other professional services	1,719	79	202	2,001	86	4	10	100
Real estate and facilities management	808	55	114	978	83	6	12	100
Government services	2,011	46	152	2,208	91	2	7	100
Education	2,769	106	213	3,088	90	3	7	100
Health	1,737	83	266	2,086	83	4	13	100
Care	1,490	65	174	1,729	86	4	10	100
Other sectors	722	43	71	836	86	5	9	100
All economy	25,054	1,340	2,457	28,851	87	5	9	100

Source: Labour Force Survey 2010, ONS

Within the Creative Media and Entertainment sector there is little variation by sub-sector. The 'creative arts and entertainment' and 'libraries, archives and museums' workforce comprising a slightly higher proportion of individuals born in the UK.²⁴

²⁴ Source: Labour Force Survey 2002-2010, ONS

Table 43 illustrates there has been considerable change in the profile of the Creative Media and Entertainment sector since 2002 when a much higher proportion of the workforce (91 per cent) were born in the UK. The proportion of overseas born workers has steadily increased to the current time.

Table 43: Employment by country of birth and nation within Creative Media and Entertainment 2002-2010 (UK)

	2002	2003	2004	2005	2006	2007	2008	2009	2010
	'000	'000	'000	'000	'000	'000	'000	'000	'000
UK	1,005	1,033	1,004	1,004	1,017	1,013	1,023	843	850
Rest of Europe (EU 27)	33	33	30	30	39	42	47	50	51
Rest of world	64	72	74	77	82	87	86	82	87
Total	1,102	1,138	1,108	1,111	1,138	1,142	1,156	975	987
<i>Unweighted base</i>	9.420	9.251	8.718	8.532	8.429	8.321	8.196	6.435	6.193

Source: Labour Force Survey 2010, ONS

Country of birth data cut by nation within the Creative Media and Entertainment sector cannot be presented due to suppression criteria placed on outputs. However, it is likely that the pattern displayed in Table 44 amongst the wider UK economy workforce will also apply, namely that there are a much higher proportion of UK born individuals in the workforce in Scotland, Wales and Northern Ireland.

Table 44: Employment by country of birth and nation, 2010

	UK		England		Scotland		Wales		Northern Ireland	
	000s	%	000s	%	000s	%	000s	%	000s	%
UK	25,054	87	20,856	86	2,264	93	1,228	94	706	92
Rest of Europe (EU 27)	1,340	5	1,176	5	85	3	37	3	42	5
Rest of world	2,457	9	2,295	9	96	4	47	4	18	2
Total	28,851	100	24,327	100	2,446	100	1,312	100	766	100
<i>Unweighted base</i>	194.426		161.480		17.022		8.693		7.231	

Source: Labour Force Survey 2010, ONS

4 Demand for, and value of, skills

Chapter Summary²⁵

- Skills required in the sector are typically high level and technical across a wide range of occupations.
- Multi-skilling is also a critical skills issue within the sector. Employers find it difficult to find 'creatives' with the necessary business and technical skills, and also business or technical experts who are creative.
- The Creative Media and Entertainment sector has a high percentage of workers with a level 4+ qualification (3rd ranked of all sectors). This has increased steadily over the past decade. However, two-fifths (38 per cent) of sector managers and professionals do not have a level 4+ qualification (low compared to other sectors).
- Compared with other sectors more people in the Creative Media and Entertainment sector say they enjoy the most variety²⁶ in their work. They are also more likely than average to have discretion over the way they work and access to flexible working. However, it should be noted that freelancers are employed on a company's terms which does not often allow for individuals to determine that they work part time, from home etc.
- 23 per cent of Creative Media and Entertainment employers have a training plan, below the average across all economic sectors (38 per cent). Furthermore, a below average number (22 per cent) have a training budget (29 per cent).
- Creative Media and Entertainment employers who provide training (52 per cent) is lower than the average across the wider economy (59 per cent).
- Associate professional and technical occupations are less likely to receive training. This is worrying given the predominance of these roles and also the specialist skills required.
- Training is most commonly provided in job specific skills such as using software; technical skills such as computer programming, computer/software usage and editing; skills to develop content for multiple platforms; multi-skilling and production skills.

²⁵ NB: Figures from official data sources (e.g. Labour Force Survey and Employer Skills Surveys) prevent analysis of key segments of the Creative Media and Entertainment sector. For further information on this see section 1.4

²⁶ The UKESS 2011 questionnaire asked employers whether employees at their establishment '**have variety in their work**'. It was up to the employer to define what '**variety**' meant to them but may for example include individuals working on different projects or with different people.

- Freelancers are more likely than employees to face barriers to training, particularly fees being too high and fear of losing work through committing time in advance.
- The sector is a well paid one compared to the wider economy, reflecting the highly qualified nature of the sector. However, low pay amongst freelancers and sole traders (excluded from data presented in this report, but available from SSCs), unpaid internships and unpaid working are evident.

4.1 Nature of skills used

Occupational activity and qualifications are considered an appropriate proxy for understanding the nature of skills. This section explores these issues in more detail, as well as some sector specific evidence regarding the types of skills needed within the Creative Media and Entertainment sector.

Table 45 summarises the main types of skills required within the five SOC major group categories of relevance to the sector and contextualises the findings of table 20, illustrating example roles within the occupational structure of the sector.²⁷ Example occupations have been added from the various sectors but are not comprehensive lists. The focus is on the balance between basic skills, employability skills, intermediate skills and higher skills.

Managers (e.g. CEOs, production managers, location managers, audience managers, directors and managers of performing or heritage venues) tend to operate at a high level, requiring higher level technical and managerial skills. Management and leadership skills required tend to be technical and transferable in nature. There is also current demand for skills specific to project management for multi-platform development, the hybrid skills combining effective leadership with innovation, creativity and understanding of technology, and the analytical skills to understand audience interests and translate it into business intelligence. Corporate and event managers able to cope with market change and increasing competition are another priority, as are management skills in brokering and maintaining networks and alliances (see section 5.2.2 and chapter 8).

A variety of professional roles (e.g. web developers, programmers, interaction designers, audience analysts, IPR lawyers, systems analysts) also require high level technical skills. Job specific technical skills are essential, with the addition of transferable communication/customer service skills in some instances. Examples of current demand for skills include visual effects occupations that are dependent on highly specialised technical skills, and broadcast technology and engineering. Furthermore, the need to fuse innovation and creativity with technical skills has been highlighted as a priority for many years.

²⁷ Although the sector does employ people in the operative, elementary and admin groupings they have been omitted from this table as none of the roles are creative occupations.

Associate Professional roles make up a high proportion of the workforce (e.g. actors, sound engineers, lighting designers, graphic designers, art directors, photo stylists, editors, camera operators, grips, costume designers). The roles predominantly require job specific intermediate level technical skills and also advanced technical support. Skills shortages and gaps currently exist in some associate professional and technical roles (see section 5.2.2). Currently neither HE nor CPD is fully equipping individuals with the technical expertise needed by employers.

Skilled trades (including occupations such as riggers, stagehands, puppet/model makers, sculptors, scenic artists, chargehands, painters, pyrotechnics, costume makers and senior dressers) and personal service occupations (e.g. make-up artists, prosthetics artists, hairdressers) require job specific technical skills at an intermediate, basic and employability level. Creative skills such as these are key to the future success of the sector.

A more detailed summary of skills in demand in the sector can be found in section 5.2.2.

Table 45: Predominant levels and types of skills required by occupational group

Broad occupational group	Sector occupations	Predominant level of skill required	Predominant type of skill required	Minimum qualification level typically required
Managers	CEO, Production Manager, Location Manager, Audience Manager, Directors and Managers of performing or heritage venues	Higher level technical and managerial skills	Technical and transferable leadership and managerial skills	Level 4+
Professionals	Web Developer, Programmer, Interaction Designer, Market Researcher, Audience Analyst, IPR Lawyer, Systems Analyst	High level technical skills	Job specific technical skills and transferable communication / customer service skills	Level 4+
Associate Professionals	Actor, Sound Engineer, Lighting Designer, Graphic Designer, Art Director, Photo Stylist, Editor, Camera Operator, Grip, Costume Designer	Higher intermediate level technical skills	Job specific technical skills and advanced technical support	Level 3+
Skilled trades	Rigger, Stagehand, Puppet/Model Maker, Sculptor, Scenic Artist, Chargehand Painter, Pyrotechnics, Costume Maker, Senior Dresser	Intermediate skills, basic skills, employability skills	Job specific technical skills	Level 2/3
Personal Service Occupations	Make-up Artist, Prosthetics Artist, Hairdresser	Intermediate skills, basic skills, employability skills	Job specific technical skills and transferable communication / customer service skills	Level 2/3

Aside from the levels of skills specified above, it is also worth noting the importance of multi-skilling within the Creative Media and Entertainment sector. Multi-skilling requires an understanding of different technology platforms and their impact on content development and digital work flow, and new approaches to working in cross-functional creative / technical teams within and across companies. It is a skill increasingly in demand as a result of digital media workflow, from content creation and production to metadata management. This is exacerbated by a shortage of new people in the sector equipped with 'T-skills' - highly specialised in one core field, but with broad skills and knowledge to utilise their specialism across teams and platforms (Creative Skillset 2010a). It is an issue affecting many sectors in the Creative Media and Entertainment sector, with particular impact in a wide variety of occupations spanning the Creative Media sectors. Many people involved in inter-disciplinary working will be involved outside the direct creative industries, but will provide a vital creative function in another sector or company. This type of skill level may also directly spur innovation in the wider economy (Design Commission, 2011).

Similar to occupations, qualifications are often used as a proxy in understanding the value and distribution of skills within a particular workforce. The Labour Force Survey asks respondents about the highest level qualification they have achieved, and the following tables show percentage estimates for the Creative Media and Entertainment sector. The qualification *levels* used in this analysis relate to the 'learning outcomes' from various qualifications in terms of N/SVQ competence specifications, see Table 46.

Table 46: Definitions of National/Scottish Vocational Qualification (learning outcome) level

Level	Definition
4	Competence that involves the application of knowledge in a broad range of complex, technical or professional work activities performed in a variety of contexts and with a substantial degree of personal responsibility and autonomy. Responsibility for the work of others and the allocation of resources is often present.
3	Competence that involves the application of knowledge in a broad range of varied work activities performed in a wide variety of contexts, most of which are complex and non-routine. There is considerable responsibility and autonomy and control or guidance of others is often required.
2	Competence that involves the application of knowledge in a significant range of varied work activities, performed in a variety of contexts. Collaboration with others, perhaps through membership of a work group or team, is often a requirement.
1	Competence that involves the application of knowledge in the performance of a range of varied work activities, most of which are routine and predictable.

Table 47 shows the percentage of each sector's workforce that has achieved a (highest) qualification at level 1, 2, 3, or 4 and above. Compared with the UK workforce as a whole, the Creative Media and Entertainment workforce have a higher percentage of people with a level 4+ qualification (59 per cent, compared to 37 per cent in the wider economy). In fact, only Education (63 per cent) and Health (61 per cent) have a higher proportion of workers qualified to level 4+. The sector may therefore be considered well qualified and hence highly skilled as a whole.

Table 47: Qualification profile of workforces within sectors, UK (2010)

	No qualifications	Level 1	Level 2	Level 3	Level 4 +	Total	Unweighted base
	%	%	%	%	%	000s	000s
Agriculture, forestry and fishing	18	21	22	15	24	406	2.978
Energy production and utilities	6	16	22	22	33	473	3.244
Manufacturing	9	19	21	22	29	2,969	20.404
Construction, building services, engineering and planning	7	16	23	28	27	2,697	17.927
Wholesale and retail trade	11	22	26	22	19	4,140	27.582
Transportation and storage	11	26	29	19	16	1,447	9.732
Hospitality, tourism and sport	10	20	27	22	20	2,046	13.183
Information and communication technologies	2	10	15	18	55	761	4.874
Creative media and entertainment	3	10	14	14	59	987	6.193
Financial, insurance & other professional services	2	12	18	17	52	2,001	12.805
Real estate and facilities management	14	23	22	17	23	978	6.565
Government services	2	12	19	20	46	2,209	15.100
Education	3	9	12	13	63	3,088	21.544
Health	3	10	14	12	61	2,087	14.749
Care	5	12	23	24	36	1,729	12.006
All economy	7	16	21	20	37	28,854	194.437

Source: Labour Force Survey 2010 (ONS)

This finding is consistent with what is known of the occupational structure of the sector, (Table 20) with these occupations requiring high levels of skills and knowledge. This also illustrating the desirable nature of working within the sector, with large numbers of graduates following accepted sectoral career paths by undertaking junior roles as they attempt to break into the sector (explored in more detail in 5.3).

Table 48 shows the variation in the qualification level achievement for the Creative Media and Entertainment workforce across the four home nations. In each of the nations the percentage of the workforce who have a level 4+ qualification is greater than 50 per cent (Wales has the lowest figure at 51 per cent). The percentage of the workforce with low level or no qualifications (level 1 and below) is also low across the nations compared to equivalent figures for the wider economy (see Table 49).

Table 48: Qualification levels within the Creative Media and Entertainment sector by nation (2010)

	UK	England	Scotland	Wales	Northern Ireland
	%	%	%	%	%
Level 4 +	59	59	57	51	59
Level 3	14	14	18	*	*
Level 2	14	14	15	21	*
Level 1 and below	13	13	11	*	*
Total	100	100	100	100	100
Weighted base (000s)	987	876	65	32	14
Unweighted base (000s)	6.193	5.411	0.438	0.214	0.130

Source: Labour Force Survey 2010 (ONS)

* Sample size too small for reliable estimate.

Table 49: Qualification levels across the whole economy by nation (2010)

	UK	England	Scotland	Wales	Northern Ireland
	%	%	%	%	%
Level 4 +	37	37	40	37	35
Level 3	20	20	22	19	19
Level 2	21	21	18	22	20
Level 1 and below	23	23	20	22	25
Total	100	100	100	100	100
Weighted base (000s)	1,729	1,409	183	97	40
Unweighted base (000s)	194.437	161.490	17.022	8.693	7.232

Source: Labour Force Survey 2010 (ONS)

Within the Creative Media and Entertainment sector it is worth considering whether these qualifications (particularly at the higher end - university degrees for example) are specifically relevant to the occupations that are prevalent within the sector (predominately associate professional and technical roles).

Creative Skillset evidence reveals that half of all Creative Media employers state they do not value formal qualifications. The apparent lack of value employers place on qualifications might be attributable to a perception that qualifications do not necessarily make new recruits to the sector 'job ready'. This was certainly a commonly expressed view from employers involved in qualitative research (Creative Skillset, 2010d). A key point made by employers is that too many (though by no means all) FE/HE courses struggle, in particular, with keeping up to date with technical changes occurring in the digital environment. Employers expressed a need for industry to have more input in shaping qualifications, but many cited time pressures and business dynamics as restrictions on them doing so.

In contrast to findings which suggest employers place little value on qualifications is the high level of graduate employment that currently exists within the workforce. Research by Creative Skillset into the destination of 2009/10 graduates also shows that the likelihood of HE graduates finding employment within the Creative Media Industries within six months of graduation increases for students who have undertaken industry-specific courses, particularly those approved by Creative Skillset (Skillset 2012).²⁸ It is difficult to say whether this is supply or demand driven as the process of recruitment is influenced by a complex set of factors including individual employer values and current labour market circumstances.

Creative & Cultural Skills' research shows that despite the fact that more than half of businesses employ people with at least a level 4 qualification, only 29 per cent expect a degree as a minimum. Rather, 42 per cent of businesses do not have any minimum expectation (in terms of qualifications) for new recruits at all. Similarly, although postgraduate qualifications are common, very few businesses (three per cent) demand them (Creative & Cultural Skills, 2009). It is particularly interesting to look at whether the training on offer to individuals reflects the wide range of occupational roles in the sector.

Since the development of both qualifications and training opportunities has been driven by student demand rather than industry need, there is a particularly large number of generalist courses and qualifications but many fewer for specialist technical roles²⁹, as such employers in the sector are concerned about the disparity between what is available through the formal education sector and what the sector actually needs.

²⁸ Six per cent of employed HE graduates from 2009/10 found employment within Skillset industries. This increased to 20 per cent for employed HE graduates from Skillset relevant courses and increased to 50 per cent for employed HE graduates from Skillset-accredited courses. DLHE Survey, HESA 2009/10 (Skillset, 2012).

²⁹ As can be seen by consulting the National Database of Accredited Qualifications (www.accreditedqualifications.org.uk)

Table 50 shows that within the Creative Media and Entertainment sector, the increase in the proportion of the workforce with a level 4+ qualification between 2002 and 2010 is quite marked (34 per cent rising to 59 per cent). This increase has meant that the proportion attaining all other levels of qualifications have all declined.

Within the UK workforce as a whole, there has been a rise (although less extreme) in people holding a level 4+ qualification from 2002 to 2010, rising from 25 per cent in 2002 to 37 per cent in 2010. Level 2 and level 3 qualifications have remained relatively stable, while those with level 1 or below qualifications have declined from 30 per cent of the workforce in 2002 to 23 per cent in 2010.

Table 50: Qualification levels within the Creative Media and Entertainment sector, UK (2002-2010)

	2002	2003	2004	2005	2006	2007	2008	2009	2010
	%	%	%	%	%	%	%	%	%
Level 4 +	34	35	36	37	39	41	41	57	59
Level 3	20	20	20	19	17	17	18	16	14
Level 2	21	21	20	19	20	19	19	14	14
Level 1 and below	25	24	25	26	24	22	22	13	13
Total	100	100	100	100	100	100	100	100	100
<i>Weighted base (000s)</i>	1,102	1,138	1,107	1,110	1,138	1,142	1,156	975	987
<i>Unweighted base (000s)</i>	9.420	9.250	6.477	7.906	8.431	8.322	8.197	6.435	6.193

Source: Labour Force Survey 2010 (ONS)

Table 51: Qualification levels for the whole economy, UK (2002-2010)

	2002	2003	2004	2005	2006	2007	2008	2009	2010
	%	%	%	%	%	%	%	%	%
Level 4 +	28	29	30	31	32	33	33	35	37
Level 3	20	20	20	20	19	19	20	19	20
Level 2	22	22	21	20	22	22	21	21	21
Level 1 and below	30	29	29	29	27	27	26	24	23
Total	100	100	100	100	100	100	100	100	100
<i>Weighted base</i>	27,905	28,165	28,455	28,741	28,986	29,163	29,380	28,810	28,854
<i>Unweighted base</i>	247.232	237.919	172.402	210.643	222.190	221.039	216.986	203.217	194.437

Source: Labour Force Survey 2010 (ONS)

4.2 Value of skills

Skills and talent development are vital to maintaining competitive advantage and also for securing growth within a sector. The real contribution of an individual's capabilities will depend on how well his/her strengths can be guided and harnessed and this section sets out to identify the extent to which management and leadership is critical across the sector, how training is provided and what barriers may exist.

Indeed the CBI Creative Industries Brief warns that in order for the sector to meet its potential, urgent action is needed to train people to the required skills levels. "Our creative industries have huge growth potential, but the lack of trained people with relevant skills to meet the sector's specialist demands is holding it back". (CBI, 2011).

Sector employers demonstrate how much they rate investment in skills by collaborating and working with SSCs. This may take the form of direct investment to training funds, for example employer contributions to Creative Skillset administered through TV and Film funds, or participating in advisory councils and committees.

4.3 High Performance working

The term High Performance Working (HPW) can encompass a broad range of meaning, and different sectors will engage with the concept in different ways, however, the assumption that *a number of different approaches* can contribute to the achievement, through particularly effective deployment of relevant skills, of consistent, impressive performance of an organisation is broadly accepted.

The UKCES describes High Performance Working as:

The bringing together and implementation of a number of practices in a holistic way to effectively manage an organisation ... [to] review their business strategies; move up the value chain (i.e. by delivering higher value goods and services); raise their demand for high skills; reorganise their work; and by so doing improve skills utilisation in the workplace and, hence, firm performance (UKCES, 2010b).

This report has already demonstrated that the sector is a highly qualified one. And a fifth of the workforce is in a manager or senior official role, for whom leadership and management skills are central to successful performance. Table 52 shows the qualification levels of managers and professionals by sector and nation.

Within the Creative Media and Entertainment sector across the UK, 38 per cent of managers and professionals do not have a level 4+ qualification, the 6th lowest figure across the UK within the 15 main sectors. It is important in this context to recognise that this indicator provides no information about the type of qualification involved and its relevance to HPW i.e. that a level 4+ qualification could relate more specifically to a particular technical skill than anything related specifically to HPW.

Table 52: Managers and professionals without level 4 or higher qualifications (% of all managers and professionals)

	UK	England	Scotland	Wales	Northern Ireland
	%	%	%	%	%
Agriculture, forestry and fishing	45	43	*	*	*
Energy production and utilities	49	51	41	*	*
Manufacturing	51	51	51	59	35
Construction	50	51	41	40	*
Wholesale and retail trade	64	64	67	60	50
Transportation and storage	61	59	67	*	*
Hospitality, tourism and sport	66	66	61	70	*
Information and communication technologies	40	40	37	*	*
Creative media and entertainment	38	38	*	*	*
Financial, insurance & other professional services	36	36	38	35	*
Real estate and facilities management	58	59	63	*	*
Government services	31	32	36	29	*
Education	10	11	8	*	*
Health	15	15	*	*	*
Care	30	30	33	*	*
All economy	39	39	37	36	27

Source: Labour Force Survey 2010 (ONS)

* Sample size too small for reliable estimate

Table 53 shows a steady decrease in the proportion of managers and professionals without a level 4+ qualification in the UK's Creative Media and Entertainment sector (46 per cent in 2002 to 38 per cent in 2010). This decline is mirrored across all economic sectors within the UK (Table 54).

Table 53: Managers and professionals without level 4 or higher qualifications 2002-2010 (Creative Media and Entertainment) (UK)

		2002	2003	2004	2005	2006	2007	2008	2009	2010
Managers or professionals without L4 or higher qualifications	000s	125	134	103	122	133	141	141	102	106
	%	46	46	36	42	44	44	45	39	38
Weighted base (number of managers and professionals)	000s	269	291	288	290	300	319	316	259	280

Source: Labour Force Survey 2010 (ONS)

Table 54: Managers and professionals without level 4 or higher qualifications 2002-2010 (All economy) (UK)

		2002	2003	2004	2005	2006	2007	2008	2009	2010
Managers or professionals without L4 or higher qualifications	000s	3,239	3,336	2,554	3,023	3,460	3,471	3,496	3,371	3,283
	%	45	45	33	38	43	42	42	40	39
<i>Weighted base (no of managers and professionals)</i>	000s	7,214	7,481	7,726	7,866	8,123	8,201	8,356	8,406	8,483

Source: Labour Force Survey 2010 (ONS)

The 2011 UK Employer Skills Survey describes four other elements of HPW relevant for discussion, these are:

- Identifying and harnessing outstanding contributions;
- Amount of variety with each team member's work;
- Amount of discretion team members can exercise; and
- Access to flexible learning in their working environment.

Data for these indicators are shown in Tables 55 to 58.

In terms of whether establishments have a formal process in place to identify 'high potential' or talented individuals, the Creative Media and Entertainment sector is less likely than the UK average to say 'yes, with formal documentation' (eight per cent compared to 14 per cent) and is one of the lowest of all industries. However, it is in line with the UK average for having an informal process in place though below the UK average for having any process in place (33 per cent compared to 31 per cent).

Table 55: Whether establishment has formal processes in place to identify 'high potential' or talented individuals

	Formal process for identifying 'high potential' individuals								Unweighted base	Weighted base
	Yes, formally documented		Yes, informally		No		Don't know			
Agriculture, forestry and fishing	5,652	5	30,105	27	72,671	64	4,348	4	820	112,776
Energy production and utilities	2,191	17	4,077	31	6,385	49	486	4	866	13,138
Manufacturing	15,955	12	41,908	31	72,179	54	3,456	3	4,001	133,498
Construction	21,136	7	89,742	29	185,426	61	8,056	3	4,570	304,360
Wholesale and retail trade	79,322	17	144,464	31	229,455	49	18,075	4	8,093	471,317
Transportation and storage	12,217	10	30,841	26	73,328	61	4,419	4	2,400	120,805
Accommodation, food and tourism activities	32,190	15	69,719	32	109,728	50	7,234	3	5,819	218,871
Information and communication	5,976	8	23,608	32	42,403	58	1,136	2	1,261	73,123
Creative media and entertainment	11,873	8	48,322	33	83,861	57	3,495	2	1,959	147,551
Financial, insurance & other professional services	31,220	18	56,823	33	80,911	47	3,669	2	2,680	172,623
Real estate and facilities management	20,259	13	48,382	30	83,504	52	9,000	6	1,745	161,145
Government	11,426	21	16,967	31	25,307	46	1,600	3	1,379	55,300
Education	18,653	32	20,236	34	18,789	32	1,231	2	2,780	58,909
Health	10,508	20	15,684	30	24,879	47	1,427	3	1,739	52,498
Care	25,788	28	26,675	29	32,817	36	6,485	7	2,455	91,765
All economy	320,952	14	702,866	31	1,198,876	52	77,227	3	44,691	2,299,921

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012). Base: All establishments in Module 1 and Scotland

Across all 15 industrial sectors the Creative Media and Entertainment sector workforce enjoy the most variety³⁰ in their work 'to a large extent', and is significantly higher than the UK average (67 per cent compared to 55 per cent). The majority (92 per cent) of employers say that their workforce experience variety either 'to a large' or 'to some' extent.

³⁰ The UKES 2011 questionnaire asked employers whether employees at their establishment 'have variety in their work'. It was up to the employer to define what 'variety' meant to them but may for example include individuals working on different projects or with different people.

Table 56: Extent to which employees have variety in their work

	Extent to which employees have variety in their work										Unweighted base	Weighted base
	To a large extent	To some extent	Not much	Not at all	Don't know							
Agriculture, forestry and fishing	76,675	68	24,469	22	7,742	7	2,816	2	1,074	1	820	112,776
Energy production and utilities	5,929	45	4,909	37	1,795	14	406	3	100	1	866	13,138
Manufacturing	67,095	50	48,484	36	12,899	10	3,756	3	1,262	1	4,001	133,498
Construction	179,144	59	88,851	29	24,047	8	9,313	3	3,003	1	4,570	304,360
Wholesale and retail trade	238,562	51	168,884	36	48,318	10	11,692	2	3,861	1	8,093	471,317
Transportation and storage	53,146	44	35,613	29	17,947	15	13,259	11	840	1	2,400	120,805
Accommodation, food and tourism activities	86,140	39	83,543	38	37,117	17	9,289	4	2,782	1	5,819	218,871
Information and communication	46,346	63	21,687	30	3,293	5	417	1	1,381	2	1,261	73,123
Creative media and entertainment	99,587	67	37,290	25	7,267	5	2,237	2	1,170	1	1,959	147,551
Financial, insurance & other professional services	94,803	55	60,363	35	12,493	7	3,148	2	1,816	1	2,680	172,623
Real estate and facilities management	92,156	57	51,012	32	15,579	10	1,561	1	837	1	1,745	161,145
Government	33,925	61	17,273	31	2,855	5	391	1	856	2	1,379	55,300
Education	38,306	65	17,346	29	2,187	4	619	1	452	1	2,780	58,909
Health	26,622	51	19,718	38	5,203	10	694	1	260	**	1,739	52,498
Care	54,001	59	31,224	34	4,410	5	972	1	1,159	1	2,455	91,765
All economy	1,256,316	55	745,134	32	212,192	9	64,300	3	21,979	1	44,691	2,299,921

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012). Base: All establishments in Module 1 and Scotland

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

Approaching two thirds (64 per cent) of Creative Media and Entertainment establishments say that their workforce to a large extent have discretion over how they do their work³¹ (the second highest percentage of all sectors, just behind Information and Communication).

³¹ The UKES 2011 questionnaire asked employers whether employees at their establishment 'have discretion over how they do their work'. It was up to the employer to define what 'discretion' meant to them but may for example include the hours that an individual chooses to work or their location of work.

Table 57: Extent to which employees have discretion over how they do their work

	Extent to which employees have discretion over how they do their work										Unweighted base	Weighted base
	To a large extent		To some extent		Not much		Not at all		Don't know			
Agriculture, forestry and fishing	61,757	55	39,087	35	6,625	6	2,485	2	2,821	3	820	112,776
Energy production and utilities	5,809	44	4,957	38	1,467	11	557	4	348	3	866	13,138
Manufacturing	63,859	48	49,442	37	11,926	9	5,326	4	2,945	2	4,001	133,498
Construction	167,066	55	103,337	34	18,624	6	10,627	3	4,706	2	4,570	304,360
Wholesale and retail trade	222,298	47	182,574	39	44,174	9	13,608	3	8,663	2	8,093	471,317
Transportation and storage	60,073	50	38,390	32	12,736	11	8,160	7	1,446	1	2,400	120,805
Accommodation, food and tourism activities	88,190	40	87,712	40	28,331	13	9,926	5	4,712	2	5,819	218,871
Information and communication	48,851	67	20,130	28	3,082	4	614	1	446	1	1,261	73,123
Creative media and entertainment	94,306	64	39,623	27	5,912	4	3,212	2	4,498	3	1,959	147,551
Financial, insurance & other professional services	88,150	51	62,426	36	15,688	9	5,292	3	1,068	1	2,680	172,623
Real estate and facilities management	95,298	59	48,171	30	11,255	7	4,656	3	1,765	1	1,745	161,145
Government	32,235	58	17,718	32	3,674	7	810	1	863	2	1,379	55,300
Education	27,530	47	26,592	45	3,231	5	660	1	897	2	2,780	58,909
Health	22,195	42	21,678	41	6,472	12	1,544	3	608	1	1,739	52,498
Care	48,843	53	36,123	39	3,779	4	1,532	2	1,488	2	2,455	91,765
All economy	1,188,767	52	814,655	35	185,638	8	71,823	3	39,037	2	44,691	2,299,921

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012). Base: All establishments in Module 1 and Scotland

Fifty-six per cent of Creative Media and Entertainment establishments say that their workforce to a large extent have access to flexible working, third only to Government, and Information and Communication sectors. However, it should be noted that freelancers are employed on a company's terms which does not often allow for individuals to determine that they work part time, from home etc.

Table 58: Extent to which employees at establishment have access to flexible working

	Employees have access to flexible working										Unweighted base	Weighted base
	To a large extent		To some extent		Not much		Not at all		Don't know			
Agriculture, forestry and fishing	48,869	43	41,468	37	12,485	11	8,004	7	1,950	2	820	112,776
Energy production and utilities	4,781	36	4,419	34	2,431	19	1,450	11	58	**	866	13,138
Manufacturing	52,687	39	44,362	33	17,955	13	16,667	12	1,827	1	4,001	133,498
Construction	139,674	46	101,224	33	33,585	11	26,266	9	3,610	1	4,570	304,360
Wholesale and retail trade	176,251	37	168,909	36	64,843	14	56,324	12	4,991	1	8,093	471,317
Transportation and storage	44,233	37	38,327	32	16,329	14	20,683	17	1,233	1	2,400	120,805
Accommodation, food and tourism activities	99,272	45	77,239	35	22,537	10	17,703	8	2,120	1	5,819	218,871
Information and communication	42,992	59	20,273	28	5,342	7	4,226	6	289	**	1,261	73,123
Creative media and entertainment	83,200	56	44,734	30	10,011	7	7,602	5	2,004	1	1,959	147,551
Financial, insurance & other professional services	89,019	52	55,484	32	15,828	9	11,747	7	546	**	2,680	172,623
Real estate and facilities management	77,691	48	52,389	33	16,393	10	13,861	9	811	1	1,745	161,145
Government	34,229	62	15,040	27	3,343	6	1,865	3	823	1	1,379	55,300
Education	14,445	25	21,754	37	12,772	22	9,545	16	393	1	2,780	58,909
Health	14,407	27	23,130	44	9,761	19	5,025	10	174	**	1,739	52,498
Care	38,920	42	35,210	38	9,701	11	6,858	7	1,075	1	2,455	91,765
All economy	1,012,366	44	783,411	34	264,071	11	216,701	9	23,372	1	44,691	2,299,921

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012). Base: All establishments in Module 1 and Scotland

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

In all the above tables there is evidence to show that establishments across the sector employ models of HPW where possible. For the Creative Media and Entertainment sector HPW is about ensuring the correct drivers of productivity are in place and the economic imperative in the industry is not always the main focus for the business. This is expressed in the finding that formalised documentation is not used to identify high performing individuals. This is due to the use of a freelance workforce in a fast moving environment along with the variety of work and the flexible working requirements that are key factors. In this regard it is also important to consider the following.

Whilst productivity is associated with efficiency and achieving strong financial outputs (i.e. time spent vs. money made), employers in the industry also perceive productive performance to be demonstrated through outputs related to financial gain such as (Creative & Cultural Skills, 2009);

- High quality goods/services
- Improved reputation
- Effective relationship management
- The development of knowledge or skills.

High levels of achievement in any of these areas is equated with 'being productive' and therefore associated with success. However, the development of knowledge and skills upon which the business or organisation can capitalise is perhaps considered to be the most important. In terms of planning, to secure productive performance, there is recognition that because these intangible outputs are difficult to measure, it is often challenging to assess productivity on an on-going basis. Rather, such outputs require an evaluation to be made at the end of a defined period. As such, many organisations look to develop and implement 'productive' working practices. For example:

- Ensuring that all staff have a set of core competencies which allow them to be flexible across the needs of the organisation;
- Reviewing the allocation of work to ensure that people are working efficiently and that the business is capitalising on the full extent of the team's skills;
- Effective leadership and management, which gives people the freedom and autonomy to manage their own time and resources, rather than strict 'top down' management;

- Planning for staff to spend approximately 80 per cent of their time working and allowing for periods of 'down time';
- Collaborative/partnership working in order to learn from the skills of others;
- Seeking work with high profile clients in order to build image and reputation.

4.4 Provision of Training

Training provision is central to the improvement of skills levels within the industry. The value of providing relevant and successful training to staff is therefore closely linked to up-skilling and subsequently greater productivity. It can take a more formal nature, or as is the case for many in the Creative Media and Entertainment sector it can be more informal such as on-the-job skills development or mentoring. The proportion of freelancers and sole traders in the sector makes the provision of training an important issue due to the additional barriers they face.

Tables 59 and 60 show the percentage of employees within each of the 15 sectors who have received training during a specified time frame (either the 4 weeks prior to the survey or the 13 weeks prior to the survey depending on the source of the data), for each of the years from 2002 to 2010. There has been a steady decline in the percentage of employees in the Creative Media and Entertainment sector who have received training in the 4 weeks prior to the survey (13 per cent in 2002 down to eight per cent in 2010). Training during this period across the UK as a whole has seen only a very slight decline (from 15 per cent in 2002 to 13 per cent in 2010).

There has also been a decline in the percentage of employees in the Creative Media and Entertainment sector who have received training in the 13 weeks prior to the survey (24 per cent in 2002 down to 17 per cent in 2010). Training during this period across the UK as a whole has fallen but only to a relatively small extent (from 28 per cent in 2002 to 26 per cent in 2010).

There are a number of possible reasons for this decline in the sector, including the effects of the recession on training budgets, an increasing reliance on freelancers within the sector (who are less likely to receive training from employers), and a move towards mentoring and on-the-job learning and skills development (the definition of training in the Labour Force Survey is very formal).

It should also be noted that sector employers invest significantly in training and development through collaborative work with SSCs. This may take the form of direct investment into training funds or participation in advisory councils and committees. For instance, Creative Skillset administers the Skills Investment Fund for the UK film industry in which all film productions are required to pay a contribution that goes towards funding trainees and apprenticeships. Similarly, the TV Skills Fund resulting from agreement with broadcasters and the Indie Training fund goes towards training the large freelance workforce within the sector.³²

³² For further information on these funds and other funding streams, please see <http://www.skillset.org/funding/>

Table 59: Percentage of employees receiving training in last 4 weeks, 2002-2010 (UK)

	2002	2003	2004	2005	2006	2007	2008	2009	2010
	%	%	%	%	%	%	%	%	%
Agriculture, forestry and fishing	7	7	6	6	6	6	6	6	6
Energy production and utilities	15	14	13	13	13	13	12	11	12
Manufacturing	10	9	9	10	9	9	9	9	9
Construction, building services, engineering and planning	10	9	10	9	9	9	9	9	8
Wholesale and retail trade	11	10	10	10	10	10	9	8	8
Transportation and storage	10	10	9	9	8	8	8	7	7
Hospitality, tourism and sport	13	12	12	11	11	10	10	10	11
Information and communication technologies	13	12	12	11	11	10	10	10	10
Creative media and entertainment	13	12	12	12	11	11	10	9	8
Financial, insurance & other professional services	18	17	17	16	15	15	15	14	15
Real estate and facilities management	14	13	14	12	13	12	12	7	8
Government services	20	20	20	20	19	18	19	19	17
Education	22	21	21	21	20	20	20	20	18
Health	24	25	25	25	24	23	22	24	24
Care	24	25	25	25	24	23	22	21	20
All economy	15	14	14	14	14	13	13	13	13
Weighted base (000s)	4,095	3,987	4,074	4,061	3,949	3,863	3,834	3,685	3,642
<i>Unweighted base (000s)</i>	<i>35.781</i>	<i>33.324</i>	<i>32.626</i>	<i>31.674</i>	<i>29.781</i>	<i>28.888</i>	<i>27.829</i>	<i>25.468</i>	<i>24.012</i>

Source: Labour Force Survey 2010, ONS

Table 60: Percentage of employees receiving training in last 13 weeks, 2002-2010 (UK)

	2002	2003	2004	2005	2006	2007	2008	2009	2010
	%	%	%	%	%	%	%	%	%
Agriculture, forestry and fishing	15	13	14	13	13	12	13	13	13
Energy production and utilities	33	31	30	28	28	28	26	25	27
Manufacturing	21	20	19	20	19	20	19	18	18
Construction, building services, engineering and planning	19	19	20	19	19	19	19	19	18
Wholesale and retail trade	20	20	20	20	18	18	18	16	16
Transportation and storage	21	21	20	19	19	18	18	17	18
Hospitality, tourism and sport	24	22	22	21	21	20	19	19	19
Information and communication technologies	27	25	24	23	23	22	21	21	20
Creative media and entertainment	24	24	23	23	23	21	21	18	17
Financial, insurance & other professional services	35	33	32	33	30	30	29	29	29
Real estate and facilities management	27	26	27	26	26	25	24	15	16
Government services	40	41	40	39	38	37	36	37	35
Education	44	42	42	42	40	39	40	39	38
Health	45	46	46	47	46	44	44	47	46
Care	45	46	46	47	46	44	44	41	40
All economy	28	28	28	28	27	26	26	26	26
Weighted base (000s)	7,952	7,873	7,917	8,037	7,883	7,681	7,669	7,382	7,359
<i>Unweighted base (000s)</i>	<i>69.767</i>	<i>65.973</i>	<i>63.658</i>	<i>63.118</i>	<i>59.87</i>	<i>57.81</i>	<i>56.008</i>	<i>51.497</i>	<i>48.93</i>

Source: Labour Force Survey 2010, ONS

Tables 61 and 62 show the percentage of employees receiving training within each nation in 2010 (for training in the 4 weeks and the 13 weeks prior to the survey respectively). Creative Media and Entertainment employees undertook a lower than average amount of training in the 4 weeks prior to the survey compared to the UK economy as a whole (eight per cent compared to 13 per cent). Unfortunately data for Scotland, Wales and Northern Ireland has been suppressed as the sample size is too small to provide reliable estimates.

Creative Media and Entertainment employees undertook a lower than average amount of training in the 13 weeks prior to the survey compared to the UK economy as a whole (17 per cent compared to 25 per cent). However, employees in Scotland and Wales undertook a higher than average amount of training compared to the wider UK economy. Once again, unfortunately data for Northern Ireland has been suppressed as the sample size is too small to provide reliable estimates.

Table 61: Percentage of employees receiving training in last 4 weeks by sector and nation, 2010

	UK	England	Scotland	Wales	Northern Ireland
	%	%	%	%	%
Agriculture, forestry and fishing	6	7	*	*	*
Energy production and utilities	12	12	13	*	*
Manufacturing	9	9	9	11	8
Construction, building services, engineering and planning	8	8	9	10	*
Wholesale and retail trade	8	8	9	9	6
Transportation and storage	7	7	8	*	*
Hospitality, tourism and sport	11	11	12	15	*
Information and communication technologies	10	10	*	*	*
Creative media and entertainment	8	8	*	*	*
Financial, insurance & other professional services	15	15	17	19	*
Real estate and facilities management	8	8	11	*	*
Government services	17	17	18	16	8
Education	18	19	17	19	*
Health	24	25	21	22	11
Care	20	20	19	26	*
All economy	13	13	13	14	7
Weighted base (000s)	3,642	3,085	317	188	52
Unweighted base (000s)	24.012	20.155	2.164	1.215	0.478

Source: Labour Force Survey 2010, ONS

*Sample size too small for reliable estimate

Table 62: Percentage of employees receiving training in last 13 weeks by sector and nation, 2010

	UK	England	Scotland	Wales	Northern Ireland
	%	%	%	%	%
Agriculture, forestry and fishing	13	15	12	*	*
Energy production and utilities	27	27	30	*	*
Manufacturing	18	18	18	20	18
Construction, building services, engineering and planning	18	18	21	18	12
Wholesale and retail trade	16	17	17	15	13
Transportation and storage	18	18	19	16	*
Hospitality, tourism and sport	19	19	20	21	*
Information and communication technologies	20	20	22	*	*
Creative media and entertainment	17	17	18	20	*
Financial, insurance & other professional services	29	29	28	32	17
Real estate and facilities management	16	16	23	18	*
Government services	35	35	35	34	24
Education	38	39	34	38	26
Health	46	47	42	44	32
Care	40	40	40	46	27
All economy	25	25	27	24	18
Weighted base (000s)	7,181	6,065	668	312	137
<i>Unweighted base (000s)</i>	<i>48.93</i>	<i>40.947</i>	<i>4.41</i>	<i>2.282</i>	<i>1.291</i>

Source: Labour Force Survey 2010, ONS

*Sample size too small for reliable estimate

Looking at receipt of training in the industry by sub-sector shows (see Table 63) that employees working in 'Motion pictures' and 'Programming and broadcasting' are less likely to receive training in both the last 4 weeks and 13 weeks prior to the survey. This is consistent with these two sectors having a large freelance workforce where employers expect to hire "work ready" staff on a project basis and illustrates the importance of employer/SSC funding streams for these sectors. Those working in 'Publishing' (15 per cent in the 4 weeks prior to the survey) and those working in 'Other professional scientific and technical activities' (34 per cent in the last 13 weeks prior to the survey) are the most likely to receive training.

Table 63: Percentage of employees receiving training in last 4 and 13 week by Creative Media and Entertainment 2-digit SIC (2010)

SIC07 codes	Description	% receiving training in last 4 weeks	% receiving training in last 13 weeks
58	Publishing	15	28
59	Motion Pictures	8	14
60	Programming and broadcasting	*	11
73	Advertising and market research	12	29
74	Other professional scientific and technical activities	13	34
90	Creative arts and entertainment	13	20
91	Libraries, archives, museums	14	32

Source: Labour Force Survey 2010, ONS

*Sample size too small for reliable estimate

In addition to evidence from the Labour Force Survey, quantitative data on training provided by employers is available from the UK Employer Skills Surveys; carried out in a coordinated way across the four home nations for the first time in 2011. According to 2011 survey, 48 per cent of employees in Creative Media and Entertainment across the UK receive training. This is a similar figure for the sector in England and Scotland. In Wales and Northern Ireland however, the figure is much higher (69 per cent of employees each). In the case of the UK, England and Scotland the figures are below average. For Wales and Northern Ireland the figures are well above average. These figures from an employer perspective are much higher than those collected direct from employees, however the time frame placed on the question to employers was 'the last 12 months' which may in part account for the difference.

Table 64: Employees receiving training by sector

	UK		England		Scotland		Wales		Northern Ireland	
	Number	%	Number	%	Number	%	Number	%	Number	%
Agriculture, forestry and fishing	198,736	43	152,352	43	†25,724	†47	8,993	29	11,667	51
Energy production and utilities	167,507	50	120,687	49	32,976	55	11,072	66	2,772	38
Manufacturing	1,146,654	45	934,516	44	93,562	48	74,719	54	43,857	52
Construction	1,072,552	48	884,923	48	116,140	47	39,666	44	31,826	46
Wholesale and retail trade	2,340,353	50	1,960,109	49	201,879	55	109,603	55	68,761	48
Transportation and storage	538,494	41	448,580	39	49,954	44	22,489	58	17,468	63
Accommodation, food and tourism activities	1,221,736	53	1,017,791	53	124,328	55	48,807	49	30,809	50
Information and communication	233,240	38	205,944	37	†15,377	†51	5,255	28	6,663	65
Creative media and entertainment	524,081	48	451,335	47	†30,017	†43	24,215	69	18,513	69
Financial, insurance & other professional services	1,109,888	54	949,712	52	101,444	73	32,505	60	26,224	69
Real estate and facilities management	560,354	47	492,799	47	†36,284	†49	19,985	60	11,286	50
Government	1,004,866	56	835,514	58	82,550	47	49,901	53	36,901	59
Education	1,598,280	63	1,354,826	63	116,696	62	84,527	72	42,231	58
Health	1,300,684	65	1,032,851	64	187,638	81	58,505	49	21,690	52
Care	969,487	64	780,108	64	89,130	63	52,831	84	47,414	64
All economy	14,476,138	53	12,050,111	52	1,337,833	56	661,045	56	427,137	54
<i>Weighted base</i>	27,547,123		23,198,476		2,381,601		1,182,314		784,732	
<i>Unweighted base</i>	2,816,693		2,345,213		201,868		178,922		90,690	

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012). Base: All employees

† Treat figures with caution due to small base size of 50-99 establishments in Scotland

Analysis at an occupational level shows that receipt of training in the Creative Media and Entertainment sector is lower for each occupation in comparison with the UK average with the exception of 'administrative and secretarial' and 'sales and customer service'. Within the sector receipt of training is highest among those in 'sales and customer service' roles (56 per cent), followed by 'professional' and 'associate professional and technical' occupations. Table 20 shows that, in employment terms, the largest percentage of individuals within the workforce work in the associate professional and technical group (45 per cent). Given this and the specialist nature of the skillset required in such occupations, it is a concern that training in this category is not higher.

Table 65: Employees receiving training by occupational group

	Creative media and entertainment		All economy	
	Number	%	Number	%
Managers, Directors and senior officials occupations	125,080	39	2,413,145	45
Professional occupations	79,331	51	1,904,780	61
Associate professional and technical occupations	83,221	50	1,022,510	56
Administrative and secretarial occupations	76,921	49	1,607,984	45
Skilled trades occupations	27,118	46	1,041,373	55
Personal service occupations	3,944	45	1,606,254	70
Sales and customer service occupations	82,131	56	1,937,670	55
Process, plant and machine operatives	9,939	42	902,782	47
Elementary occupations	22,836	45	1,938,793	48
Other	13,560	n/a	100,845	n/a
All occupations	524,081		14,476,137	
<i>Weighted base</i>	<i>524,081</i>		<i>14,476,137</i>	
<i>Unweighted base</i>	<i>45,411</i>		<i>1,517,802</i>	

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012)

Base: All employees receiving training

Note: % figures refer to % of those working in x occupation who have received training

In terms of planning for training, across the UK only 23 per cent of Creative Media and Entertainment employers have a training plan, below the average across all economic sectors (38 per cent). This does vary by nation, however, with 46 per cent of Creative Media and Entertainment employers in Northern Ireland having a training plan (compared with 37 per cent for the Northern Ireland average).

Table 66: Employers with a training plan

	UK		England		Scotland		Wales		Northern Ireland	
	Number	%	Number	%	Number	%	Number	%	Number	%
Agriculture, forestry and fishing	28,388	26	20,580	26	†4,477	†34	1,243	12	2,087	29
Energy production and utilities	6,140	49	4,860	49	655	51	424	51	201	38
Manufacturing	38,568	30	31,191	28	4,415	47	1,940	36	1,022	27
Construction	84,115	27	67,305	26	9,885	46	3,996	30	2,930	27
Wholesale and retail trade	178,673	38	150,280	38	15,096	43	8,396	40	4,900	35
Transportation and storage	34,005	28	28,993	27	2,929	37	1,362	32	721	32
Accommodation, food and tourism activities	91,460	42	74,110	41	11,037	50	3,997	35	2,316	40
Information and communication	16,895	23	15,419	23	†550	†15	632	32	294	27
Creative media and entertainment	32,800	23	28,824	23	†1,975	†18	1,064	23	937	46
Financial, insurance & other professional services	77,091	45	68,380	45	4,263	51	2,779	49	1,668	49
Real estate and facilities management	66,124	40	59,648	40	†4,566	†38	1,158	38	752	41
Government	30,270	55	24,097	54	3,715	67	1,455	54	1,003	49
Education	42,196	65	34,120	64	3,472	78	2,414	76	2,189	67
Health	33,941	65	28,543	64	2,653	82	1,791	64	954	64
Care	60,643	69	50,342	70	4,822	57	3,311	76	2,168	67
All economy	863,494	38	721,499	37	79,173	45	37,719	38	25,099	37
<i>Weighted base</i>	2,299,921		1,960,298		175,115		98,952		65,558	
<i>Unweighted base</i>	87,572		75,053		2,503		6,012		4,004	

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012)

Base: All employers

† Treat figures with caution due to small base size of 50-99 establishments in Scotland

A similar picture is presented when looking at employers with a training budget. A below average number (22 per cent) have a training budget in the Creative Media and Entertainment sector. Again this differs by nation (16 per cent in Scotland, 21 per cent in Wales and 46 per cent in Northern Ireland). Northern Ireland is the only nation where an above average proportion of Creative Media and Entertainment employers have a training budget.

Table 67: Employers with a training budget

	UK		England		Scotland		Wales		Northern Ireland	
	Number	%	Number	%	Number	%	Number	%	Number	%
Agriculture, forestry and fishing	23,169	21	16,302	21	†3,969	†30	647	6	2,250	32
Energy production and utilities	4,538	36	3,604	36	434	34	353	43	147	27
Manufacturing	27,468	21	23,265	21	2,161	23	1,323	25	720	19
Construction	59,489	19	49,098	19	6,428	30	2,230	17	1,733	16
Wholesale and retail trade	113,516	24	97,068	24	9,142	26	4,534	22	2,773	20
Transportation and storage	23,228	19	19,317	18	2,846	36	549	13	516	23
Accommodation, food and tourism activities	61,752	28	50,474	28	7,274	33	2,519	22	1,484	26
Information and communication	17,700	24	14,936	23	†1,918	†54	560	29	285	26
Creative media and entertainment	32,018	22	28,351	22	†1,756	†16	961	21	950	46
Financial, insurance & other professional services	60,256	35	55,617	36	1,607	19	1,924	34	1,108	33
Real estate and facilities management	53,538	32	46,838	31	†4,955	†41	1,077	36	68	36
Government	30,711	56	25,025	56	2,957	53	1,554	58	1,175	58
Education	43,136	67	35,825	67	2,950	66	2,382	75	1,979	60
Health	22,570	43	19,100	43	1,952	60	943	34	574	39
Care	51,869	59	43,591	61	3,377	40	2,884	66	2,017	62
All economy	657,040	29	554,765	28	57,270	33	25,624	26	19,380	30
<i>Weighted base</i>	2,299,921		1,960,298		175,115		98,952		65,558	
<i>Unweighted base</i>	87,572		75,053		2,503		6,012		4,004	

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012)

Base: All employers

† Treat figures with caution due to small base size of 50-99 establishments in Scotland

Employers are beginning to raise concerns that highly qualified graduates are not 'job ready' and need to acquire further skills, either on the job or through ongoing training opportunities (Creative Skillset 2010a and Creative & Cultural Skills 2009). In addition, UK employees across all industries who undertake regular training earn on average between five per cent and six per cent higher than those who do not undertake workplace training (Green and McIntosh, 2006).

Skills gaps identified by employers (see chapter 5.2) suggest the need for a more professional approach to training delivery in the Creative Media and Entertainment sector. Traditionally Government investment is targeted primarily at further and higher education and at support to acquire additional vocational qualifications. The sector has been less successful in benefiting from funding for vocational qualifications because their workforce tends to be qualified to a higher level than the average across the workforce. However, at an SSC level a huge amount of work is being done to improve provision through the accreditation of courses and introduction of centres of excellence, steered by employer demand in terms of the skills that are valued.

Creative Skillset has established the Creative Skillset Media and Film Academy Network centres of excellence in media and film education and a complementary system of course accreditation. Driven and steered by employer demand for a new fusion between technological and creative skills Creative Skillset has introduced clear signposting of those courses and institutions that meet the needs of industry. The Creative Skillset Tick is a kitemark of quality indicating the media degrees and universities best suited to prepare individuals for a career in the sector. The process ensures that courses keep up with the rapid pace of change, and students benefit from using the latest technologies and working with industry throughout their studies.

Supported by catalyst funding from the Growth and Investment Fund Creative Skillset have embarked on an ambitious project to extend course accreditation across all key areas of the Creative Industries, incorporating and supporting existing accreditation, but widening this out to all practice-based level 4 and above undergraduate and postgraduate courses that prepare students for careers across the Creative Industries - specifically creative media and fashion, as defined in the guidelines. By 2012 Creative Skillset aims to increase the number of accredited courses from 30 to over 200. All courses will be kitemarked with the Creative Skillset 'Tick', providing a comprehensive route map across a Higher Education Landscape that had over 18,250 courses in 2009/10 relevant to the Creative Industries (Creative Skillset, 2012).³³

Some impressive statistics are available from this Creative Skillset commissioned analysis of the DLHE survey that indicated students from Creative Skillset Accredited courses are more likely to find Creative Skillset-relevant employment than their counterparts on more general Creative Skillset-relevant courses. Half of all Creative Skillset Accredited course students (50 per cent) who find employment six months after their course find employment in Creative Skillset industries compared to 20 per cent on all Creative Skillset-relevant courses (Creative Skillset, 2012).³⁴

In addition, 74 per cent of the Creative Media employers that had used Creative Skillset's learning and development services, including Creative Skillset Academies and accredited courses, stated it had made their company more productive and/or competitive (Creative Skillset, 2010a).

An important step change has been that the Media and Film Academy Network are offering not only entry level programmes at Foundation Degree and undergraduate level, but also short courses and CPD for experienced professionals. These 'Build your own MA' short courses offered by Creative Skillset Media Academies offer industry-focused and flexible training for staff and freelancers with prior experience in the creative media industries.

Creative Skillset has also developed Advanced Apprenticeships in Creative and Digital Media, Fashion and Textiles, Photo Imaging and Set crafts along with an Apprenticeship in Fashion and Textiles. Furthermore, Higher Level Apprenticeships are under development for Fashion and Textiles, Advertising and Creative and Digital Media.

³³ This is based on Skillset analysis of HESA data. These courses were selected based on the courses relevance to gaining employment within Skillset industries and cover a range of courses from technical and theoretical Creative Media & Fashion and Textiles courses, business related courses and courses associated with key craft occupations.

³⁴ DLHE Survey, HESA 2009/10

In 2009 Creative & Cultural Skills established the National Skills Academy (NSA) for Creative and Cultural. The Skills Academy operates as a national partnership of 20 training providers across England, each working with over 200 employers. The Skills Academy is now operating without development funding through membership subscriptions. In 2012 the Skills Academy will become a National Portfolio Organisation of Arts Council England.

Focussing initially on the backstage and technical areas of live music and events the National Skills Academy set out to create solutions to improve:

- Information, Advice and Guidance
- Entry into the sector
- Continuing Professional Development
- Employers and education working together.

The Skills Academy is a key delivery partner for the Creative Apprenticeships programme. Through the Apprenticeship Training Service offered by the NSA, new relationships with employers and partners are being brokered and more Apprentices are thus being developed in the sector, more than 1,000 at most recent count.

For Creative & Cultural Skills, the Creative Apprenticeships programme was launched in 2008. The programme has been hugely successful, with employers investing between £4.4 and £7.9 million in wages for learners alone. This has become a highly valued entrance route into the sector, with 6 out of 10 apprentices staying with their employer after the completion of their training.

The most recent cohort of Creative Apprentices is set to deliver a net gain of c£2.4 million over the coming decade, while the next 5 cohorts will deliver forecast gains of more than £16 million. Over the coming four years Creative & Cultural will be expanding the number of apprenticeship frameworks and extending our network of training providers in order to provide credible alternative routes into the creative and cultural industries.

New investment from 2012, will see the Skills Academy extend its remit to two areas, firstly into the cultural heritage, design and jewellery sectors and secondly the establishment of academies in Scotland, Wales and Northern Ireland (initially for the theatre, live music and design sectors). Examples of products and services which this work will bring to these new sectors include Apprenticeships, careers resources and events, and tailored professional development. These will offer careers events, careers advice, apprenticeships and tailored products and services.

4.5 Investment in Training

UK employers make a huge investment in training, for example estimates from the UK Commission's Employer Skills Surveys (2011) show a cross economy investment of £49bn. The average annual investment in training per trainee is £3,275 (Davies *et al*, 2012). The survey included a very detailed series of questions to reach this figure including fees to external providers, cost of internal training centres and staff, cost of equipment used in training, value of staff time whilst participating in training, travel and subsistence, levy payments to training organisations (including SSCs) and any grants or subsidies received.

Table 68 shows, for each broad sector, the number and percentage of employers who provide training to their staff both across the UK and for each nation. As can be seen, the percentage of Creative Media and Entertainment employers who provide training (52 per cent) is lower than the average across the wider economy (59 per cent).

The percentage of sector employers who train their staff is highest in Northern Ireland (71 per cent, which is also much higher than the Northern Ireland average of 64 per cent). The Wales sector average is 57 per cent, which is only a little short of the average across the Wales economy of 59 per cent. In Scotland and England the averages fall well short of the wider economy.

Table 68: Employers providing training by sector

	UK		England		Scotland		Wales		Northern Ireland	
	Number	%	Number	%	Number	%	Number	%	Number	%
Agriculture, forestry and fishing	58,869	53	42,577	54	†7,737	†58	3,536	34	5,019	71
Energy production and utilities	8,743	69	6,858	69	1,040	81	554	67	291	54
Manufacturing	73,972	57	61,935	55	6,629	71	3,464	64	1,944	51
Construction	163,641	53	137,473	53	13,506	63	7,193	55	5,469	51
Wholesale and retail trade	261,948	56	218,681	55	23,692	67	11,347	54	8,228	58
Transportation and storage	55,004	45	46,106	43	5,633	70	2,103	50	1,161	52
Accommodation, food and tourism activities	134,314	61	108,618	60	15,665	71	6,570	58	3,461	59
Information and communication	39,090	54	34,418	52	†2,974	†83	1,215	62	483	44
Creative media and entertainment	74,069	52	63,945	51	†5,976	†54	2,690	57	1,457	71
Financial, insurance & other professional services	114,074	67	101,640	66	5,354	64	4,605	80	2,474	73
Real estate and facilities management	95,068	57	85,826	57	†6,652	†55	1,340	44	1,249	67
Government	41,608	76	32,980	74	4,715	85	2,343	87	1,571	77
Education	55,629	86	45,309	85	4,348	97	2,941	92	3,031	92
Health	44,797	86	38,133	85	3,208	99	2,216	79	1,239	84
Care	73,669	84	60,516	84	6,798	81	3,562	81	2,793	86
All economy	1,361,250	59	1,141,560	58	119,847	68	58,171	59	41,668	64
<i>Weighted base</i>	2,299,921		1,960,298		175,115		98,952		65,558	
<i>Unweighted base</i>	87,572		75,053		2,503		6,012		4,004	

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012).

Base: All employers

† Treat figures with caution due to small base size of 50-99 establishments in Scotland

These trends may be related to size of employer. As the Creative Media and Employment sector is made up of a high proportion of SMEs this may to some extent explain the lower proportion of employers providing training. For example in a pattern supported by the national Employer Skills Survey, Creative Skillset research shows that larger employers are more likely to fund or arrange learning and development (apart from anything they have more people to train), and the sectors where learning and development is most prevalent are those containing more larger employers, for example, Broadcast Radio and Broadcast Television (Creative Skillset, 2010a).

A UKCES report discusses the issue of informal training that occurs within small firms and hence understanding what can be classified as training is an important debate. Creative Media is a featured sector with employees indicating they require more training than offered, whilst employers draw from the same pool so common interest is there to maintain high skills levels (UKCES, 2010d).

Another issue for the sector is investment in training for freelancers. Creative Skillset research shows that not all employers providing training to employees extend this to people on short term contracts (59 per cent do actually extend their training). Given the increasing reliance on freelancers this is a critical issue for the sector (Creative Skillset, 2010a) and highlights the importance of the freelance funds highlighted on p.75.

Table 69 shows the number of employers providing training to employees by occupational group. The Creative Media and Entertainment profile is similar to the wider economy, except for associate professional and technical occupations, where the figure is more than double (19 per cent c.f. nine per cent) and elementary occupations which is much lower (three per cent c.f. 16 per cent). As discussed above, the training provided to associate professional and technical occupations is still only the third highest within the Creative Media and Entertainment sector, which is surprising given levels of employment.

A key issue is that the Creative Media and Entertainment sector workforce comprises a large pool of 'qualified' potential recruits who are frequently 'associate professional' in occupation (see section 3.1.1). That training does not occur more in these sectors is problematic for a sector reliant on these key craft and specialist areas.

Table 69: Employers providing training to employees by occupational group

	Creative media and entertainment		All economy	
	Number	%	Number	%
Managers, directors and senior officials occupations	45,607	62	825,928	61
Professional occupations	9,557	13	152,106	11
Associate professional and technical occupations	14,266	19	124,610	9
Administrative and secretarial occupations	19,746	27	372,218	27
Skilled trades occupations	6,315	9	192,480	14
Personal service occupations	1,071	1	129,265	9
Sales and customer service occupations	11,119	15	261,082	19
Process, plant and machine operatives	2,921	4	96,592	7
Elementary occupations	2,401	3	217,981	16
Other	3,360	5	35,410	3
Don't know	998	1	20,638	2
Arrange training for all categories of staff employed	41,286	56	714,095	52
Arrange training for some categories of staff	32,783	44	647,154	48
<i>Weighted base</i>	74,069		1,361,249	
<i>Unweighted base</i>	2,738		66,916	

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012). Base: All establishments providing training

The *types* of training provided are shown in Table 70. Job specific training is by far the most common type of training offered by sector employers. Training in new technology is also higher than across the whole economy in general (63 per cent and 47 per cent respectively) and indicates that the sector is at the forefront of new and innovative methods of practice. Management training is interestingly lower than the UK average.

Evidence provided by Creative Skillset's (2010) Creative Media Employer Survey gives further details on the types of training that may fall within the categories of 'job specific training' and 'training in new technology'. The most common areas of training provided to staff cited in the research that are relevant to these two categories are: skills in using software packages (reported by 47 per cent of employers); technical skills (most commonly including computer programming, computer/software usage and editing – 42 per cent); skills to develop content for multiple platforms (17 per cent); multi-skilling (15 per cent) and production skills (15 per cent) – (Creative Skillset, 2010a).

Table 70: Type of training funded or arranged for employees

	Creative media and entertainment		All economy	
	Number	%	Number	%
Job specific training	63,618	86	1,149,860	84
Health and safety/first aid training	38,223	52	970,183	71
Induction training	26,971	36	702,846	52
Training in new technology	46,812	63	641,023	47
Management training	18,724	25	457,763	34
Supervisory training	13,946	19	437,577	32
Personal Development Training*	1,796	2	45,451	3
Other	101	**	4,101	**
None of these	807	1	8,809	1
Don't know	36	**	2,412	**
<i>Weighted base</i>	74,069		1,361,249	
<i>Unweighted base</i>	2,738		66,916	

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012). Base: All establishments providing training

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

Investment in training is an area that requires more research to fully understand the issues arising. The economic impact of training is one such area and the UKCES is currently carrying out an analysis of available literature to design a method of measuring this. One major issue is that most existing analysis is for Level 3 and below and therefore not applicable to interventions aimed at improving higher skills.

4.6 Barriers to Training

A recent report from the Creative Industries Council Creative Skillset Skills Group states:

In order to maximise the potential of the sector, existing barriers need to be addressed – particularly those associated with skills and talent development, which are vital to maintaining competitive advantage. Many of these barriers are a consequence of the distinctive structure of the creative labour market: the sector is characterised by a prevalence of SMEs, micro-businesses, start-ups, freelancers and project-based work with, for example, some 84 per cent of Creative Media firms employing fewer than 10 people. Whilst there are examples of good practice across the sector, this structural feature is responsible for an overall market failure in which there is under investment in human capital, fewer training opportunities, insufficiently structured career progression and unfair access to jobs and opportunities. (CIC SSG, 2012, p. 3).

A variety of barriers to training exist and within the Creative Media and Entertainment sector by far the most common reason is that all staff are fully proficient/there is no need for training (61 per cent). To varying degrees this is also the biggest barrier to training across the nations. Table 71 (overleaf) gives a full breakdown of all barriers to training within the sector.

Barriers to training are a particularly big issue for freelancers in the sector and reinforces the need for Creative Skillset initiatives with industry backed funding streams to enable this substantial freelance population to up-skill. For example, Creative Skillset research within the Creative Media sectors shows that 92 per cent of freelancers reported barriers or obstacles to accessing training compared with 86 per cent of employees. In addition, more freelancers than employees report every type of problem except employers either being unwilling to pay for training or allow time off for it. The most extreme differences are in reporting that the fees are too high (70 per cent compared with 36 per cent), fear of losing work through committing time in advance (31 per cent against nine per cent), and lack of suitable training opportunities in the UK (22 per cent against eight per cent) – (Creative Skillset, 2010b).

Creative Skillset research also identifies that half (50 per cent) of employers cited barriers that restricted their ability to provide more learning and development; over half stated they cannot afford to invest in learning and development (54 per cent). Other common reasons for not providing more learning and development are not having enough time (41 per cent), employees already being proficient (38 per cent) and courses not being suitable for company needs (28 per cent). A further 19 per cent reported that learning and development is not considered to be a priority at the current time, perhaps highlighting an effect of the recession on employers' priorities (Creative Skillset, 2010a).

Table 71: Barriers to training within the Creative Media and Entertainment sector

	UK		England		Scotland		Wales		Northern Ireland	
	Number	%	Number	%	Number	%	Number	%	Number	%
All our staff are fully proficient / no need for training	41,894	61	37,161	61	*	*	1,073	54	169	30
No money available for training	10,981	16	9,072	15	*	*	621	31	45	8
Training is not considered to be a priority for the establishment	5,402	8	4,758	8	*	*	515	26	130	23
No training available in relevant subject area	4,294	6	4,023	7	*	*	153	8	8	1
Managers have lacked the time to organise training	1,774	3	1,744	3	*	*	5	**	25	4
Learn by experience/Learn as you go	1,888	3	1,888	3	*	*	0	0	0	0
External courses are too expensive	1,475	2	1,448	2	*	*	16	1	10	2
Small firm/training not needed due to size of establishment	1,251	2	1,251	2	*	*	0	0	0	0
Employees are too busy to undertake training and development	2,227	3	2,187	4	*	*	40	2	0	0
Employees are too busy to give training	1,125	2	1,095	2	*	*	21	1	9	2
Business not operating long enough/New business (inc. takeover transition)	436	1	436	1	*	*	0	0	0	0
Trained staff will be poached by other employers	351	1	351	1	*	*	0	0	0	0
I Don't know what provision is available locally	890	1	865	1	*	*	0	0	25	4
The start dates or times of the courses are inconvenient	152	**	152	**	*	*	0	0	0	0
The courses interested in are not available locally	462	1	340	1	*	*	122	6	0	0
No new staff (only train new staff)	353	1	326	1	*	*	0	0	27	5
The quality of the courses or providers locally is not satisfactory	685	1	685	1	*	*	0	0	0	0
Difficult to get information about the courses available locally	213	**	213	**	*	*	0	0	0	0
Other	2,234	3	1,897	3	*	*	216	11	8	1
No particular reason	3,404	5	3,217	5	*	*	6	**	170	30
Don't know	322	**	322	1	*	*	0	0	0	0
<i>Weighted base</i>	68,156		60,648		*		1,994		563	
<i>Unweighted base</i>	986		901		*		42		27	

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012). Base: All establishments that do not provide training

*Data suppressed as unweighted establishment base <50 for Scotland

** Denotes a figures of greater than 0% but less than 0.5%

4.7 Remuneration

Average wage data provides further insight into the value attached to the skills that an individual brings to an organisation. As shown in Table 72, earnings expressed as wages per hour across the Creative Media and Entertainment sector are above the average for the economy as a whole. In fact the sector has the third highest hourly wage for each year, behind only 'financial, insurance and other professional services' and 'information and communication technologies.'. However, wages have risen by £0.36/hour (2.1 per cent) between 2008 and 2010. This compares to 4.7 per cent for the wider economy.

Table 72: Average hourly wage by sector (£) (UK)

	2008	2009	2010
	£	£	£
Agriculture, forestry and fishing	10.42	11.18	10.38
Energy production and utilities	15.93	16.41	16.62
Manufacturing	13.86	14.28	14.37
Construction, building services, engineering and planning	14.66	15.29	15.39
Wholesale and retail trade	11.00	11.27	11.36
Transportation and storage	12.44	13.16	13.21
Hospitality, tourism and sport	9.14	9.35	9.52
Information and communication technologies	20.05	20.26	20.40
Creative media and entertainment	17.14	17.29	17.50
Financial, insurance & other professional services	21.06	21.45	21.99
Real estate and facilities management	11.36	11.64	11.71
Government services	14.40	14.87	15.62
Education	14.67	15.39	15.71
Health	14.97	15.79	16.45
Care	10.21	10.30	10.49
All economy	13.94	14.39	14.60

Source: Annual Survey of Hours and Earnings, 2010 (ONS)

As shown in Table 73, within the Creative Media and Entertainment sector, the average hourly wage ranges across the seven sub-sectors. The sub-sectors with the highest mean wages are 'programming and broadcasting' (£20.90) and 'advertising and market research' (£20.63). At the other end of the scale 'creative arts and entertainment' and 'libraries, archives and museums' are just below the national average in 2010.

Table 73: Average hourly wage by Creative Media and Entertainment sector (£) (UK)

SIC07 codes	Description	Wage £
58	Publishing	17.57
59	Motion pictures	18.31
60	Programming and broadcasting	20.90
73	Advertising and market research	20.63
74	Other professional scientific and technical activities (nb: includes design, photographic, translation)	16.74
90	Creative arts and entertainment	14.29
91	Libraries, archives, museums, etc	13.16

Source: Annual Survey of Hours and Earnings, 2010 (ONS)

Creative & Cultural Skills most recent research on wages suggests that these figures may be quite high. The Annual Survey of Hours and Earnings is based on a sample of one per cent of employee jobs. Within the Creative Media and Entertainment sector, therefore, the data presented above is likely to exclude significant proportions of freelancers and sole traders who are prevalent in the sector.³⁵ Creative Skillset's (2010) Creative Media Workforce Survey further shows that the average wage for freelancers is lower than employees across a whole range of occupations and sub-sectors (£25,300 vs. £32,400 overall). It also records high levels of income relative to the UK average (Creative Skillset, 2010b). This finding fits with the highly qualified nature of the workforce and reflects the extent of specialist roles driving the Creative Media and Entertainment sector forward. The shortage of individuals with the specialised skills required by employers coupled with the difficulty for individuals to gain those specialised skills ensures wages remain high.

The recent Low Pay Commission, National Minimum Wage: Low Pay Commission Report provides evidence from unions within the sector that suggest the prevalence of unpaid internship working within the sector can lead to an expectation of long periods of no or very low pay. BECTU add that "unpaid work was still widespread and its effect was discriminatory against young people from modest backgrounds who could not afford to work for no income for a year or two. Such young people were regularly lost to its sectors" (Low Pay Commission, 2011).

³⁵ For more information visit www.creative-blueprint.co.uk for data associated with craft, cultural heritage, design, literature, music, performing arts and visual arts.

4.8 Skills and sectoral performance

As demonstrated earlier in this chapter the Creative Media and Entertainment sector workforce is a highly skilled one, where high and intermediate level technical skills are common in a wide range of roles. It is therefore a natural conclusion to draw that a better skilled workforce will create better quality and more marketable products. Innovation is a key driver here, as it is intrinsically linked to productivity and performance and in creative occupations arguably the driver of value adding output. As outlined in the next chapter a number of skills needs concern skills specific to innovation and new technology.

Within the Creative Media and Entertainment sector there are a number of factors influencing the development of an organisation that must be managed well in order to generate high levels of productivity (Creative & Cultural Skills, 2009).

- **Business strategy and structure:** The strategies pursued by the business in order to ensure success are the most crucial underpinning factor. This includes HR/personnel strategies and change management skills/strong leadership. Striking an appropriate balance between commercial and creative focus in the business is also important. Businesses need to recognise the requirement to have strong business skills alongside creative talent in order to be successful. In addition, it needs to recognise that these skill sets might not be within the capability of the same person.
- **People:** Staff and staff performance is key to success. The age of the workforce can have significant influence on the development of the business. Given the important role of individual knowledge, replacing staff that leave or retire can present either a challenge or an opportunity, depending on the circumstances.
- **Location/premises:** Geographical location also plays a key role. Proximity to a centre of activity in the sector and other firms/organisations working in the same field can be advantageous in terms of identifying clients and collaborators and also for the reputation of the business.

- **Marketplace:** The ability to identify and respond to the marketplace is essential in achieving success. This includes exploiting opportunities in terms of generating revenue and also developing business practice where necessary. Keeping pace with technological change is crucial and presents a significant challenge to many in the sector. The current recession has had the effect of changing consumer behaviours and as such the successful organisation must look to adapt its business model in order to suit the new marketplace. For example, developing the business to offer a package of services, rather than focusing on one specialist area.
- **Relationships:** The relationships that a business and its employees have within and outside of the organisation itself and the sector are key factors in themselves. Networking and organisational memberships (e.g. of trade bodies/professional associations etc.) are very important vehicles for generating business, building reputation, exchanging knowledge and developing collaborative partnerships.

To secure competitive advantage, businesses look to pursue a number of strategies, linked to the modes of achieving success detailed above. Given the pace of change within the sector, keeping up-to-date with trends and developments is crucial in keeping organisations competitive and profitable.

The recession has had a significant impact on the marketplace and businesses have had to respond quickly to clients with reduced revenues and funding cuts. This has created a constrained operating environment. However, in some cases the recession has resulted in an increase in revenue, particularly where businesses have adapted their operating model to suit the new circumstances.

Isolating the value for and impact on the business of investment in staff development is complex. The outputs or outcomes of training are often intangible in the short term and contribute over the long term to the development of the business.

In many cases, the business case for investment in skills is understanding the extent to which the skills developed help maintain competitiveness and support the survival/development of the business in an increasingly competitive marketplace. Additionally, investment in the skills of staff across the business can 'spread risk' and prevent over-reliance on one individual. However, it is generally recognised that it takes time to see a return on investment and often returns are difficult to observe beyond subjective assessment of change in the individual.

Impacts related to investing in skills in general include:

- Increased individual confidence (often invaluable for business development)
- Lower staff turnover, linked to high morale and positive working environment
- Rapid career progression/development, through gaining new skills/knowledge.

Additionally, consultations with employers demonstrate that businesses perceive that their investment in people plays a role in developing skills across the sector as a whole, particularly in terms of making individuals (and therefore their employers) more competitive, which is essential for long term growth.

The types of training businesses perceive to be most valuable to productivity are those which are knowledge based and focus on contextualising learning in the professional environment. Given this, there is a perception that a great deal of the required expertise that cannot be gained through highly formal training/education, particularly as external courses tend to be far removed from the business environment.

Short 'knowledge exchange' training courses (such as specific software or technology training) are also seen as valuable as they come with the expectation that staff will be able to apply the skills immediately after receiving the training. Additionally, the use of mentors in order to share experience and access specialist advice is also seen as invaluable for directors and senior staff.

Identifying a tangible link between investment in skills and productivity is challenging as training and development tends to build skills and knowledge incrementally, rather than in one go. Additionally, the myriad of other factors that influence a person's performance can make measuring the direct impact of learning very difficult. The impact of training can also be diluted, depending on the specific training and the person receiving it, particularly if the person leaves the business soon after completing some training.

5 Extent of skills mismatch

Chapter Summary³⁶

- At almost 38,000 vacancies, the level reported by employers in the Creative Media and Entertainment sector equates to three per cent of the workforce. Whilst the sector suffers less from hard to fill vacancies, the number of these caused by skills shortages is higher than reported in the overall economy.
- At an occupational level, vacancies are most likely to be reported at associate Professional level. Five per cent of employers report vacancies for this grouping.
- At an employee level, 12,000 vacancies exist amongst Associate Professionals. Over 2,000 of these are hard-to-fill and make up a third of all hard-to-fill vacancies in the sector. In proportional terms, Skilled Trades are both the hardest to fill and suffer from the greatest level of skills shortages.
- The three biggest reasons for hard-to-fill vacancies in the Creative Media and Entertainment sector are: the low number of applicants with the required skills; low number of applicants with the required attitude, motivation or personality; and the lack of work experience the company demand. Increased workload for staff and delays developing new products and services and losing business or orders to competitors are the main impacts of hard-to-fill vacancies whilst increasing advertising/recruitment spend and using new recruitment methods or channels are the measures used to overcome hard-to-fill vacancies.
- Four per cent of sector employers report retention difficulties, mainly due to wages offered being lower than other firms and not enough people interested in doing the type of work. Introducing further training was the most popularly used measure to overcome these difficulties.
- Over 41,000 employees that equates to four per cent of Creative Media and Entertainment workforce were deemed to have gaps in their skills. Sales and Customer Service staff were reported to have the highest number of skills gaps followed by Associate Professionals and Professionals. Increased workload and increased operating costs were the biggest consequence of these skills gaps.

³⁶ NB: Figures from official data sources (e.g. Labour Force Survey and Employer Skills Surveys) prevent analysis of key segments of the Creative Media and Entertainment sector. For further information on this see section 1.4

- 19 per cent of the Creative Media and Entertainment workforce are reported to be 'over-qualified' and 'over-skilled' which is above the all economy average. This is mainly due to the highly competitive job nature of the sector and the existence of graduates who undertake job roles below their level of qualifications to step onto the career ladder.
- The extent to which skills deficiencies are hampering growth in the Creative Media and Entertainment sector are apparent in a number of recent reports published on a sub-sectoral level, demonstrating the extent to which the sectors competitiveness against global competitors is being hampered by skills deficiencies.

Skills mismatch has been identified by the UKCES as the central tenet for understanding how skills deficiencies can shape demand and supply requirements and lead to prosperity within the economy (UKCES, 2010f). This chapter investigates the various tenets that contribute to skills mismatch within the Creative Media and Entertainment sector and an detailed analysis of specific skills requirements within the sector.

5.1 Extent and nature of vacancies

The level and type of vacancies and the reasons for them are key measures of both the recruitment needs within the economy and the associated reasons employers may find vacancies hard-to-fill (HTF).

5.2 Level of Vacancies

Table 74 shows the estimated numbers of vacancies, hard-to-fill vacancies³⁷, and skill shortage vacancies³⁸ (SSVs) reported by employers within the Creative Media and Entertainment sector compared to the other sectors of the UK economy.

Vacancies equated to three per cent of employment, which is a similar proportion to the overall economy. Whilst hard-to-fill vacancies and a proportion of vacancies are lower than the overall economy, it must be noted that the proportion of hard-to-fill vacancies due to skills shortages is higher. This indicates that skills rather than personal attributes of individuals are the major issue when it comes to recruitment difficulties within the Creative Media and Entertainment sector.

³⁷ Described by UKCES as those vacancies classified as hard-to-fill.

³⁸ Described by UKCES as a subset of hard-to-fill vacancies where the reason given for the difficulty filling the position is a low number of applicants with the required skills, work experience or qualifications.

Table 74: Profile of vacancies by sector (UK)

	Volume			%			Weighted base	Unweighted base
	Vacancies	HTF vacancies	SSV (prompted and unprompted)	Vacancies as a % of employment	HTF vacancies as a % of vacancies	SSV as a % of vacancies		
Agriculture, Forestry & Fishing	14,641	5,785	4,238	3	40	29	466,870	19,506
Energy Production & Utilities	9,343	1,590	1,236	3	17	13	333,050	47,228
Manufacturing	40,252	11,834	9,711	2	29	24	2,541,188	291,593
Construction, Building Services Engineering and Planning	47,241	19,103	12,394	2	40	26	2,235,270	150,111
Wholesale & Retail Trade	95,390	17,441	12,619	2	18	13	4,674,684	514,820
Transportation and Storage	25,734	4,739	3,182	2	18	12	1,320,126	114,658
Hospitality, Tourism and Sport	73,886	18,245	11,179	3	25	15	2,313,487	258,524
Information and Communication Technologies	29,361	5,449	4,937	5	19	17	614,641	53,681
Creative Media and Entertainment	37,885	6,824	5,502	3	18	15	1,086,978	87,953
Financial, Insurance & other Professional Services	58,847	11,732	10,623	3	20	18	2,052,039	112,945
Real Estate & Facilities Management	31,155	5,773	4,252	3	19	14	1,183,601	91,204
Government Services	35,917	9,330	5,938	2	26	17	1,780,058	223,796
Education	34,684	4,984	3,729	1	14	11	2,538,545	387,221
Health	27,811	5,281	3,330	1	19	12	2,004,436	219,765
Care	37,494	5,924	3,335	2	16	9	1,504,729	157,681
Not Within Scope	36,266	9,533	7,248	4	26	20	897,422	86,007
Total	635,907	143,564	103,453	2	23	16	27,547,123	2,816,693

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012).

Bases: Vary - Vacancies as a % of employment based on all employment; Hard-to-fill vacancies as a % of vacancies based on all vacancies; SSVs as a % of vacancies based on all vacancies.

The breakdown of the three types of vacancies, by sector, across the home nations, as shown in Table 75, highlights a number of variations within the sector. For instance, there is a far higher percentage of vacancies apparent in Northern Ireland than across the Northern Ireland economy as a whole (11 per cent c.f. two per cent). In respect to HTF vacancies, Scotland (one per cent for Creative Media and Entertainment compared to 20 per cent for the whole Scotland economy), Wales (18 per cent c.f. 36 per cent) and Northern Ireland (seven per cent c.f. 44 per cent) show significant differences from their wider national economies.

In terms of SSV percentages, again Scotland (zero per cent for Creative Media and Entertainment³⁹ compared to 14 per cent), Wales (16 per cent c.f. 22 per cent) and Northern Ireland (four per cent c.f. 22 per cent) show significant difference from the whole economy picture.

³⁹ It is worth noting that despite official data sources showing no SSVs in Scotland, SSC knowledge of the sectors within the nation and indicative data (Skillset, 2010a) suggests that there are some SSVs in Scotland.

Table 75: Profile of vacancies by sector and nation

	Vacancies as a % employment				HTF vacancies as a % vacancies				SSV as a % vacancies			
	England	Scotland	Wales	NI	England	Scotland	Wales	NI	England	Scotland	Wales	NI
Agriculture, forestry & fishing	3	†4	2	0	36	†45	87	0	28	†22	85	0
Energy production & utilities	2	7	4	1	11	22	32	49	9	17	22	25
Manufacturing	2	1	2	2	28	39	30	33	23	36	27	29
Construction, Building Services Engineering and Planning	2	2	2	1	42	29	41	27	26	24	34	16
Wholesale & retail trade	2	2	2	2	18	17	23	32	13	10	12	18
Transportation and Storage	2	2	3	1	17	6	48	60	12	3	29	11
Hospitality, Tourism and Sport	3	3	4	2	23	25	56	29	13	17	41	23
Information and Communication Technologies	5	†5	3	3	18	†35	19	13	16	†28	17	13
Creative media & entertainment	3	†2	5	11	20	†1	18	7	16	†0	16	4
Financial, Insurance & other Professional Services	3	2	2	11	19	7	12	44	17	6	12	44
Real estate & facilities management	3	†1	2	1	18	†29	17	0	14	†22	12	0
Government services	2	1	2	2	25	10	46	43	17	5	4	36
Education	1	2	1	1	16	6	6	16	12	2	5	11
Health	2	1	1	1	19	19	17	27	12	9	13	27
Care	3	1	3	3	16	19	20	13	9	16	13	3
Total	2	2	2	2	22	20	36	44	16	14	22	22
<i>Weighted base</i>	23,198,476	2,381,601	1,182,314	784,732	545,064	45,749	25,542	19,552	545,064	45,749	25,542	19,552
<i>Unweighted base</i>	2,345,213	201,868	178,922	90,690	43,960	3,186	2,999	1,759	43,960	3,186	2,999	1,759

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012).

Bases: Vary - Vacancies as a % of employment based on all employment. Hard-to-fill vacancies as a % of vacancies based on all vacancies. SSVs as a % of vacancies based on all vacancies. † Treat figures with caution due to small establishment base size of 50-99 in Scotland.

Of all vacancies identified within the UK Employer Skills Survey 2011, the Creative Media and Entertainment sector is responsible for six per cent of the overall total in the UK economy. In terms of HTF vacancies and SSVs, the figures are six per cent and seven per cent respectively. Given their large size, the Wholesale and Retail Trade (18 per cent) and Hospitality, Tourism and Sport (12 per cent) sectors are responsible for contributing the largest number of vacancies.

Table 76: Employers with vacancies, hard-to-fill vacancies and skills shortage vacancies

	Vacancies		HTF vacancies		SSV		Weighted base	Unweighted base
	Number	%	Number	%	Number	%		
Agriculture, Forestry & Fishing	8,285	3	4,141	5	2,660	4	110,220	1,547
Energy Production & Utilities	1,783	1	635	1	532	1	12,610	1,614
Manufacturing	17,423	6	7,684	8	6,040	9	130,709	7,776
Construction, Building Services Engineering and Planning	22,972	8	11,596	13	9,607	14	306,403	8,961
Wholesale & Retail Trade	50,681	18	13,499	15	9,778	14	470,200	16,150
Transportation and Storage	13,036	5	4,127	5	2,662	4	122,058	4,735
Hospitality, Tourism and Sport	32,674	12	11,656	13	7,435	11	220,055	11,318
Information and Communication Technologies	9,146	3	3,596	4	3,386	5	72,281	2,510
Creative Media and Entertainment	16,182	6	5,506	6	4,746	7	143,772	3,762
Financial, Insurance & other Professional Services	21,794	8	5,310	6	4,556	7	170,887	5,343
Real Estate & Facilities Management	17,403	6	4,651	5	3,956	6	166,486	3,424
Government Services	8,185	3	1,877	2	1,204	2	54,687	2,605
Education	14,466	5	3,220	4	2,386	4	64,540	5,439
Health	9,577	3	2,820	3	1,842	3	52,370	3,398
Care	15,589	6	3,956	4	2,054	3	87,899	4,763
Not in scope	15,583	6	6,497	7	5,121	8	114,744	4,227
Total	274,779	100	90,771	100	67,965	100	2,299,921	87,572

UK Commission's Employer Skills Survey (Davies et al, 2012).

Base: All employers

To understand how vacancies, hard to fill vacancies and skills shortage vacancies relate to skill types and levels, it is necessary to look at how this phenomena impacts various occupation levels within the sector. Table 77 shows the proportion of employers reporting vacancies within each of the nine broad SOC occupational categories.

As shown in Table 77⁴⁰, while the percentage of employers within the Creative Media and Entertainment sector with any vacancies is comparatively low generally. Given the large proportion of employment in associate professional roles, the vacancy rate for this occupational grouping (five per cent c.f. two per cent for the whole economy) should be noted. As shown in Table 20, recruitment into this occupational group is therefore unsurprisingly high.

Table 77: Employers reporting vacancies by occupation, Creative Media and Entertainment sector

	UK		England		Scotland		Wales		Northern Ireland	
	Number	%	Number	%	Number	%	Number	%	Number	%
Managers	601	**	587	**	0	0	4	**	11	1
Professionals	3,369	2	3,114	2	32	**	146	3	77	4
Associate professionals	6,938	5	6,747	5	66	1	46	1	79	4
Administrative/ clerical staff	3,395	2	2,739	2	445	4	126	3	86	4
Skilled trades occupations	1,008	1	968	1	18	**	4	**	19	1
Caring, leisure and other services staff	209	**	154	**	35	**	0	0	21	1
Sales and customer services	1,476	1	1,097	1	15	**	216	5	149	7
Machine operatives	621	**	576	**	18	**	19	**	8	**
Elementary staff	1,051	1	786	1	42	**	218	5	6	**
Unclassified staff	217	**	204	**	0	0	5	**	8	**
<i>Weighted base</i>	143,772		126,071		10,969		4,684		2,048	
<i>Unweighted base</i>	3,762		3,301		99		227		135	

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012).

Base: All UK establishments in sector.

Treat figures for Scotland with caution due to small establishment base size of 50-99.

** Denotes a figures of greater than 0% but less than 0.5%.

⁴⁰ Please note data is based on employers

Table 78⁴¹ shows the numbers of HTF and SSVs identified with the main (SOC Major Group) occupational areas within Creative Media and Entertainment sector (see Table 45 for examples of sector occupations). The greatest numbers of HTF vacancies and SSVs as a proportion of vacancies are to be found within Skilled Trades Occupations. In absolute terms, Associate Professional roles make up almost a third of the overall total and Professionals almost a quarter. Creative Skillset's research illustrates that Distribution, Sales and Marketing, Technical Development, Art and Design and Business Management occupations that all map to these occupational groups were amongst the ten occupations that employers found hardest-to-fill (Creative Skillset, 2010a). Additionally, the increasing multi-faceted requirements of Creative Media Professionals with the proliferation of digital content and need for new skills, the creation of specialist roles and the requirement to have a broader understanding of technologies relating to their function are of growing importance (Creative & Cultural Skills, 2010).

⁴¹ Please note data is based on employees

Table 78: Profile of vacancies by occupation within the Creative Media and Entertainment sector

	Volume			HTF vacancies as a % vacancies	SSV as a % vacancies	Weighted base (number of vacancies)	Unweighted base (number of vacancies)	Weighted base (establishments reporting vacancies)	Unweighted base (establishments reporting vacancies)
	Vacancies	HTF vacancies	SSV						
Managers	688	167	127	24	18	688	49	601	42
Professionals	6,286	1,380	1,221	22	19	6,286	477	3,369	214
Associate professionals	11,877	2,221	2,033	19	17	11,877	753	6,938	350
Administrative/clerical staff	4,858	1,020	500	21	10	4,858	333	3,395	174
Skilled trades occupations	1,354	504	423	37	31	1,354	104	1,008	44
Caring, leisure and other services staff	*	*	*	*	*	*	*	*	*
Sales and customer services staff	5,641	785	628	14	11	5,641	268	1,476	98
Machine operatives	*	*	*	*	*	*	*	*	*
Elementary staff	3,067	543	416	18	14	3,067	194	1,051	53
Unclassified staff	*	*	*	*	*	*	*	*	*
Total	37,484	6,824	5,500	18	15	37,484	2,399	18,887	1,037

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012).

Base: All vacancies.

Establishment bases provided for suppression reasons.

* Data suppressed as unweighted establishment base < 25

5.3 Nature of Vacancies

Whilst, the propensity of sectoral employment and skills needs have been discussed, it is important to understand the reasons employers within the sector find vacancies hard-to-fill and the impact having these vacancies have on their businesses. Demonstrating the highly skilled and specialist nature of many of the occupations within the Creative Media and Entertainment sector, Table 79 shows that the three biggest reasons identified by employers for causing HTF vacancies in the Creative Media and Entertainment sector are:

- Low number of applicants with the required skills
- Low number of applicants with the required attitude, motivation or personality
- Lack of work experience the company demands.

Compared to the whole economy, significant causes of HTF vacancies which are greater than the average are as follows:

- Low number of applicants with the required skills (51 per cent c.f. 40 per cent)
- Lack of work experience the company demands (24 per cent c.f. 21 per cent)
- Low number of applicants with the required attitude, motivation or personality (26 per cent c.f. 18 per cent)
- Poor terms and conditions (e.g. pay) offered for post (14 per cent c.f. 13 per cent)
- Lack of qualifications the company demands (18 per cent c.f. 11 per cent)
- Remote location/poor public transport (nine per cent c.f. six per cent).

A significant implication of these findings is the apparent lack of value employers place on qualifications given the high level of employment of graduates. This might be attributable to a perception that qualifications do not necessarily make new recruits to the sector 'job ready' and helps to explain why a lack of work experience is an important reason for hard-to-fill vacancies.

Mismatch of applicants' skills to the needs of the job is a common issue, and experience in work is often a much greater priority than academic qualifications. Recent evidence reveals that half of employers state they do not value formal qualifications (Creative Skillset and Creative & Cultural Skills, 2011).

Employers therefore are experiencing skills shortages whilst the sector is over-supplied with highly qualified individuals. For the Creative Media and Entertainment sector, it is not necessarily a case of up-skilling or re-skilling, rather it is about ensuring that individuals emerging from the education system are appropriately skilled, ensuring that supply meets demand (Creative & Cultural Skills, 2009).

Table 79: Causes of hard-to-fill vacancies within the Creative Media and Entertainment sector

	UK		England	
	Number	%	Number	%
Low number of applicants with the required skills	2,812	51	2,679	53
Lack of work experience the company demands	1,305	24	1,093	22
Not enough people interested in doing this type of job	663	12	647	13
Low number of applicants with the required attitude, motivation or personality	1,446	26	1,429	28
Poor terms and conditions (e.g. pay) offered for post	759	14	723	14
Low number of applicants generally	320	6	281	6
Lack of qualifications the company demands	991	18	808	16
Job entails shift work/unsociable hours	437	8	419	8
Remote location/poor public transport	484	9	402	8
Too much competition from other employers	265	5	232	5
Poor career progression / lack of prospects	103	2	97	2
Not full-time/permanent work	6	**	0	0
Low number of suitable applicants inc. Age of applicants	46	1	38	1
Poor recruitment channels/mechanisms (inc. lack/cost of advertising)	94	2	94	2
Seasonal work	53	1	53	1
Benefits trap	66	1	66	1
Lack of funding for the position	18	**	18	**
Difficulty with work permits/immigration issues for non-EU staff	38	1	38	1
Other	659	12	647	13
No particular reason	8	**	8	**
Don't know	61	1	61	1
<i>Weighted base</i>	5,506		5,061	
<i>Unweighted base</i>	267		240	

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012).

Base: All establishments with hard-to-fill vacancies

Data for Wales, Scotland and Northern Ireland suppressed as unweighted establishment base < 25 (<50 for Scotland)

** Denotes a figures of greater than 0% but less than 0.5%

Table 80 shows how Creative Media and Entertainment employers felt such vacancies were adversely affecting their business. The most significant impact factors are: an increased workload for other staff; a delay developing new products or services; and difficulties meeting customer services objectives, all of which can have a significant scale of impact given the competitive, fast paced, project based nature of business activity in the sector. These factors are significant for the whole economy as well, however increased workload for other staff (89 per cent c.f. 83 per cent) and delay developing new products or services (51 per cent c.f. 41 per cent) have significantly more impact. Have difficulties meeting customer service objectives, is cited slightly less than the whole economy average (38 per cent c.f. 45 per cent). Other areas where there is significant difference are (lower): have difficulty meeting quality standards (17 per cent c.f. 34 per cent) and (higher): outsource work (31 per cent c.f. 26 per cent) and withdraw from offering certain products, services (30 per cent c.f. 26 per cent).

Table 80: Impact of having hard-to-fill vacancies within the Creative Media and Entertainment sector

	UK		England	
	Number	%	Number	%
Increase workload for other staff	4,904	89	4,526	89
Have difficulties meeting customer services objectives	2,070	38	1,935	38
Lose business or orders to competitors	2,215	40	2,158	43
Delay developing new products or services	2,808	51	2,677	53
Experience increased operating costs	1,690	31	1,386	27
Have difficulties meeting quality standards	915	17	845	17
Have difficulties introducing new working practices	1,690	31	1,575	31
Outsource work	1,733	31	1,660	33
Withdraw from offering certain products or services altogether	1,651	30	1,627	32
Have difficulties introducing technological change	1,225	22	1,176	23
None	174	3	174	3
Don't know	13	**	13	**
<i>Weighted base</i>	5,506		5,061	
<i>Unweighted base</i>	267		240	

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012). Base: All establishments with hard-to-fill vacancies

Data for Wales, Scotland and Northern Ireland suppressed as unweighted establishment base < 25 (<50 for Scotland). ** Denotes a figures of greater than 0% but less than 0.5%.

Where vacancies cannot be filled, employers have to respond by taking steps to deal with the problem. Table 81 shows the three most significant measures used by Creative Media and Entertainment employers:

- Increased advertising (47 per cent)
- Using new recruitment methods or channels (35 per cent) and
- Redefining existing jobs (15 per cent).

Whilst these are all significant for the whole economy as well, in all cases the Creative Media and Entertainment figure is higher and underlines how employers are most likely to attempt to stimulate demand rather than develop supply. Interestingly, employers in Creative Media and Entertainment do not regularly incorporate changes in training structure into their business (ranging from two to three per cent of responses), and are more likely to outsource the work as a consequence (10 per cent). This is consistent with the information in Chapter 4 that highlighted training practices and difficulties employers within the Creative Media and Entertainment sector have in accessing training.

Table 81: Measures taken by employers to overcome hard-to-fill vacancies in the Creative Media and Entertainment sector

	UK		England	
	N	%	N	%
Increasing advertising / recruitment spend	2,584	47	2,477	49
Using NEW recruitment methods or channels	1,907	35	1,790	35
Redefining existing jobs	830	15	623	12
Increasing the training given to your existing workforce	121	2	121	2
Increasing / expanding trainee programmes	99	2	95	2
Being prepared to offer training to less well qualified recruits	175	3	150	3
Bringing in contractors to do the work, or contracting it out	561	10	528	10
Increasing salaries	192	3	183	4
Recruiting workers who are non-UK nationals	84	2	66	1
Making the job more attractive e.g. recruitment incentives, enhanced T&Cs, working hours	68	1	68	1
Other	47	1	28	1
Nothing	520	9	502	10
Don't know	171	3	171	3
<i>Weighted base</i>	5,506		5,061	
<i>Unweighted base</i>	267		240	

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012). Base: All establishments with hard-to-fill vacancies. Data for Wales, Scotland and Northern Ireland suppressed as unweighted establishment base < 25 (<50 for Scotland).

5.4 Staff Retention

Understanding the level of staff retention within the sector is an important measure for understanding the potential likelihood of vacancies emerging. Retention problems reported by employers within the Creative Media and Entertainment sector at four per cent is slightly below the whole economy figure.

Table 82: Employers with retention problems by sector and nation

	UK (excl. Scotland)		England		Wales		Northern Ireland	
	Number	%	Number	%	Number	%	Number	%
Agriculture, Forestry & Fishing	4,954	5	4,236	5	360	3	358	5
Energy Production & Utilities	555	5	484	5	62	8	9	2
Manufacturing	6,493	5	5,883	5	433	8	177	5
Construction, Building Services Engineering and Planning	10,569	4	9,710	4	722	5	138	1
Wholesale & Retail Trade	18,192	4	16,682	4	891	4	619	4
Transportation and Storage	5,676	5	5,240	5	321	8	115	5
Hospitality, Tourism and Sport	18,345	9	16,670	9	1,126	10	548	9
Information and Communication Technologies	3,084	4	2,948	4	57	3	79	7
Creative Media and Entertainment	5,303	4	4,891	4	306	7	106	5
Financial, Insurance & other Professional Services	6,271	4	5,876	4	339	6	55	2
Real Estate & Facilities Management	5,826	4	5,649	4	139	5	38	2
Government Services	2,496	5	2,200	5	208	8	88	4
Education	2,925	5	2,493	5	267	8	165	5
Health	3,297	7	2,961	7	249	9	87	6
Care	5,134	6	4,615	6	327	7	191	6
Not within scope	6,810	6	6,476	6	247	6	87	3
Whole Economy	105,929	5	97,014	5	6,054	6	2,860	4
<i>Weighted base</i>	2,124,807		1,960,298		98,952		65,558	
<i>Unweighted base</i>	85,069		75,053		6,012		4,004	

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012). Base: All establishments in England, NI, Wales (question not asked in Scotland)

As has been established in Chapter 4, the workforce is highly skills with large levels of potential supply looking to forge careers within the sector. Table 83 highlights this pattern reporting of people not interested in this type of work is far lower than the whole economy picture (36 per cent c.f 51 per cent) as less of a reason for retention problems. However, the competitive environment for "proven talent" and the casual nature of much labour supply, means employers encounter greater difficulties concerning wages (40 per cent c.f. 33 per cent across the whole economy) and unattractive conditions of employment (33 per cent c.f. 25 per cent across the whole economy). Long/unsocial hours (35 per cent) were also a major factor highlighting the flexible working schedules many employers in the sector work to.

Table 83: Reasons for retention problems within the Creative Media and Entertainment sector

	UK (excl. Scotland)		England		Wales		Northern Ireland	
	N	%	N	%	N	%	N	%
Not enough people interested in doing this type of work	1,907	36	1,842	38	*	*	*	*
Long/unsocial hours	1,831	35	1,762	36	*	*	*	*
Wages offered are lower than those offered by other firms	2,138	40	2,052	42	*	*	*	*
Staff don't want long term commitment	1,068	20	1,020	21	*	*	*	*
Lack of career progression	1,466	28	1,338	27	*	*	*	*
Too much competition from other employers	1,089	21	1,040	21	*	*	*	*
Impact of the benefits trap	781	15	742	15	*	*	*	*
Unattractive conditions of employment	1,742	33	1,484	30	*	*	*	*
Geographic location of the firm	860	16	787	16	*	*	*	*
Difficult to find experienced/skilled staff	338	6	338	7	*	*	*	*
Nature of work is too difficult/mentally and physically tiring	66	1	55	1	*	*	*	*
Other	605	11	561	11	*	*	*	*
None	234	4	234	5	*	*	*	*
Don't know	0	0	0	0	*	*	*	*
<i>Weighted base</i>	5,303		4,891		*	*	*	*
<i>Unweighted base</i>	229		203		*	*	*	*

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012). Base: All establishments in England, NI, Wales that find it difficult to retain staff (question not asked in Scotland)

*Data suppressed as unweighted establishment base < 25

** Denotes a figures of greater than 0% but less than 0.5%

The most common measures cited by Creative Media and Entertainment employers to overcome retention problems (and compared to the whole economy) on the focus on these issues identified for retention difficulties. The most popular measures cited are:

- Introduced further training/development opportunities (31 per cent c.f. 25 per cent for the whole economy)
- Offered higher pay or more incentives than normal (21 per cent c.f. 22 per cent for the whole economy)
- Introduced flexible working hours (12 per cent c.f. 12 per cent for the whole economy)

Creative Media and Entertainment employers are just over half as likely to introduce improved recruitment methods than employers across the economy as a whole (8 per cent c.f. 15 per cent), yet, are more likely to invest in training in order to retain existing staff than they are to overcome hard to fill vacancies.

Table 84: Measures taken by employers to overcome retention problems within the Creative Media and Entertainment sector

	UK (excl. Scotland)		England		Wales		Northern Ireland	
	N	%	N	%	N	%	N	%
Introduced further training/development opportunities	1,662	31	1,632	33	*	*	*	*
Offered higher pay or more incentives than normal	1,134	21	1,123	23	*	*	*	*
Altered/improved recruitment methods	451	8	432	9	*	*	*	*
Introduced flexible working hours	612	12	599	12	*	*	*	*
Changed the job specification by giving some of the tasks to other staff	365	7	333	7	*	*	*	*
Introduced job enrichment	249	5	231	5	*	*	*	*
Improved career progression	263	5	249	5	*	*	*	*
Changed working environment generally	177	3	171	3	*	*	*	*
Changed the job specification by automating some of the tasks	72	1	72	1	*	*	*	*
Provided assistance with travel	87	2	87	2	*	*	*	*
Used agency staff /sub contractors	105	2	105	2	*	*	*	*
Provided assistance with childcare	54	1	54	1	*	*	*	*
Other	150	3	100	2	*	*	*	*
Not taken any measures to overcome retention difficulties	1,618	31	1,349	28	*	*	*	*
Don't know	27	1	22	**	*	*	*	*
<i>Weighted base</i>	5,303		4,891		*		*	
<i>Unweighted base</i>	229		203		*		*	

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012).

Base: All establishments in England, NI, Wales that find it difficult to retain staff (question not asked in Scotland)

*Data suppressed as unweighted establishment base < 25

** Denotes a figures of greater than 0% but less than 0.5%

Issues with retention have many implications for employers and can severely impact the effectiveness of how a workplace functions.

The greatest impact on Creative Media and Entertainment employers (and compared to the whole economy) are:

- More strain on management of existing staff in covering the shortage (73 per cent c.f. 79 per cent for the whole economy)
- Loss of efficiency or increased wastage (54 per cent c.f. 47 per cent for the whole economy)
- Restrictions to business development activities (46 per cent c.f. 43 per cent for the whole economy)
- Loss of business to competitors (45 per cent c.f.38 per cent for the whole economy).

Table 85: Impact of retention difficulties in the Creative Media and Entertainment sector

	UK (excl. Scotland)		England		Wales		Northern Ireland	
	Number	%	Number	%	Number	%	Number	%
Loss of business to competitors	2,411	45	2,154	44	*	*	*	*
Restrictions to business development activities	2,416	46	2,285	47	*	*	*	*
Increased running costs (for example use of excess overtime, subcontracting or use of temporary staff etc)	1,386	26	1,285	26	*	*	*	*
More strain on management of existing staff in covering the shortage	3,876	73	3,478	71	*	*	*	*
An increase in recruitment costs due to more advertising or use of a recruitment agency	1,983	37	1,851	0	*	*	*	*
Difficulties with quality	2,101	40	1,799	37	*	*	*	*
Difficulties with customer service	1,942	37	1,665	34	*	*	*	*
Loss of efficiency or increased wastage	2,853	54	2,521	52	*	*	*	*
Difficulties with accommodating technological change	1,040	20	973	20	*	*	*	*
Difficulties with introducing new working practices	993	19	916	19	*	*	*	*
Something else	96	2	63	1	*	*	*	*
Not affected the business	316	6	316	6	*	*	*	*
Don't know	13	**	13	**	*	*	*	*
<i>Weighted base</i>	5,303		4,891		*		*	
<i>Unweighted base</i>	229		203		*		*	

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012). Base: All establishments in England, NI, Wales that find it difficult to retain staff (question not asked in Scotland)

*Data suppressed as unweighted establishment base < 25

** Denotes a figures of greater than 0% but less than 0.5%

5.5 Recruitment channels

A major barrier to skills development within the Creative Media and Entertainment sector is how it recruits new entrants.

Table 86 shows that employers within the Creative Media and Entertainment sector recruit young people at similar levels to the average for the economy as a whole. The exception is Scotland where there is a significantly lower incidence of recruitment (14 per cent c.f. 25 per cent).

Table 86: Employers recruiting one or more young person over the last 3 years

	UK		England		Scotland		Wales		Northern Ireland	
	Number	%	Number	%	Number	%	Number	%	Number	%
Agriculture, Forestry & Fishing	21,769	20	14,815	19	†2,725	†20	1,183	11	3,046	43
Energy Production & Utilities	2,660	21	2,080	21	322	25	197	24	61	11
Manufacturing	31,047	24	26,304	23	2,442	26	1,437	27	863	23
Construction, Building Services Engineering and Planning	66,741	22	55,108	21	6,498	30	2,973	23	2,161	20
Wholesale & Retail Trade	120,702	26	101,878	25	9,862	28	5,297	25	3,665	26
Transportation and Storage	18,432	15	16,069	15	1,496	19	476	11	391	17
Hospitality, Tourism and Sport	70,608	32	59,071	33	6,164	28	3,583	32	1,789	31
Information and Communication Technologies	14,960	21	13,659	21	†794	†22	241	12	266	24
Creative Media and Entertainment	31,843	22	28,704	23	†1,573	†14	1,082	23	484	24
Financial, Insurance & other Professional Services	37,955	22	34,274	22	1,679	20	1,230	21	773	23
Real Estate & Facilities Management	23,229	14	21,827	15	†699	†6	475	16	229	12
Government Services	10,268	19	8,375	19	1,084	20	378	14	431	21
Education	28,641	44	24,132	45	1,812	41	1,450	45	1,247	38
Health	13,817	26	11,547	26	938	29	822	29	510	34
Care	26,557	30	22,175	31	1,955	23	1,481	34	947	29
All economy	552,385	24	467,925	24	43,211	25	23,664	24	17,584	27
<i>Weighted base</i>	<i>2,299,921</i>		<i>1,960,298</i>		<i>175,115</i>		<i>98,952</i>		<i>65,558</i>	
<i>Unweighted base</i>	<i>87,572</i>		<i>75,053</i>		<i>2,503</i>		<i>6,012</i>		<i>4,004</i>	

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012).

Base: all establishments. NB: Scottish employers were asked a slightly different question; results cannot be compared directly to UK, England, Wales, or Northern Ireland figures. Scottish employers have not been included in the UK base. † Treat figures with caution due to small base size of 50-99 establishments in Scotland.

Whilst these figures at face value show Creative Media and Entertainment sector employers have similar recruitment patterns as the overall economy, research has indicated how recruitment occurs is still a significant issue for employers in the Creative Media and Employment sector. The 2011 Creative Industries Sector Skills Assessment identified nine key barriers to recruitment into the Creative Media and Entertainment sector (Creative Skillset and Creative & Cultural Skills, 2011). These are:

1. Across many parts of the sector, entry is characterised by knowing people with links to the sector;
2. The continuing demographic change that presents challenges to a sector that does not follow best practice;
3. Career paths across the sector are not well known or understood by potential new entrants from education;

4. There is a lack of formal learning embedded within the sector;
5. A general lack of appropriate formal qualifications past first degree level;
6. The availability of people looking for work experience does not requires employers to offer high engagement levels;
7. Existing demand to work in some sub-sectors creating a disincentive to change;
8. Poor perceptions in some parts of the sector erodes the ability to recruit entrants whilst low level entry wages also act as a disincentive;
9. Poor educational links with the sector to recruit widely and fairly.

5.6 Extent and nature of skills issues

5.6.1 Extent of skills shortages and gaps

Table 87 shows the nature of the skills shortages reported by employers in the Creative Media and Entertainment sector. With the large level of associate professional level employment and the specialised skills require for roles within this occupation, two thirds (66 per cent) of Creative Media and Entertainment employers state that 'job specific skills' are lacking in skills shortage vacancies, the same proportion as employers across the whole economy (both by far the greatest issue for employers).

Around half (51 per cent) of Creative Media and Entertainment employers state that 'technical or practical skills' are lacking in skills shortage vacancies, slightly higher than the proportion of employers across the whole economy (46 per cent). The next most common skills shortage areas, found lacking by nearly two fifths, are 'problem solving skills' (38 per cent), 'written communication skills' (37 per cent), 'literacy skills' (37 per cent - much higher than the 29 per cent of employers across the whole economy), 'customer handling skills' (36 per cent) and 'planning and organisation skills' (36 per cent - lower than the 41 per cent of employers across the whole economy).

Given the digital and technological cutting edge nature of work for many Creative Media and Entertainment employers, IT skills found lacking in skills shortage vacancies are at a more advanced level than across the whole economy. A third (31 per cent) of Creative Media and Entertainment employers experience a lack of 'advanced IT or software skills', compared to just a fifth (21 per cent) of employers across the whole economy. This reflects the use of advanced, specialised software programs such as Autodesk MAYA, Final Cut Pro and Adobe Photoshop in everyday usage by employers within the sector. Conversely, given the highly qualified and young age of the workforce who have been exposed to IT, just nine per cent of Creative Media and Entertainment employers experience a lack of 'basic computer literacy/using IT', compared to 16 per cent of employers across the whole economy. The shortage of advanced IT skills was illustrated by the recent Hope Livingstone review (2011) that reported whilst school curriculum's focussed on ICT office skills that produced competent IT users, was not embedding the more rigorous computer science and programming skills that are hindering performance within sectors such as VFX.

Table 87: Skills lacking in Skills Shortage Vacancies within the Creative Media and Entertainment sector

	UK		England	
	Number	%	Number	%
Basic computer literacy / using IT	508	9	508	10
Advanced IT or software skills	1,685	31	1,595	31
Oral communication skills	1,588	29	1,463	29
Written communication skills	2,050	37	1,999	39
Customer handling skills	1,981	36	1,888	37
Team working skills	1,180	21	1,133	22
Written Welsh language skills	4	**	0	0
Oral Welsh language skills	4	**	0	0
Foreign language skills	1,083	20	1,044	20
Problem solving skills	2,072	38	1,864	36
Planning and Organisation skills	1,989	36	1,903	37
Strategic Management skills	1,695	31	1,561	31
Numeracy skills	1,570	29	1,554	30
Literacy skills	2,052	37	2,036	40
Office admin skills	677	12	643	13
Technical or practical skills	2,813	51	2,555	50
Job specific skills	3,607	66	3,400	67
Experience/lack of product knowledge	27	**	21	
Personal attributes e.g. motivation, work ethos, common sense, initiative, reliability, commitment, punctuality, flexibility)	232	4	232	5
Other	39	1	0	0
No particular skills difficulties	223	4	223	4
Don't know	132	2	132	3
<i>Weighted base</i>	<i>5,502</i>		<i>5,108</i>	
<i>Unweighted base</i>	<i>325</i>		<i>297</i>	

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012).

Base: All skills shortage vacancies.

Data for Wales, Scotland and Northern Ireland suppressed as unweighted establishment base < 25 (<50 for Scotland)

** Denotes a figures of greater than 0% but less than 0.5%.

Table 88: Skills lacking in Skills Shortage Vacancies, whole economy

	UK		England		Scotland		Wales		Northern Ireland	
	Number	%	Number	%	Number	%	Number	%	Number	%
Basic computer literacy / using IT	16,832	16	13,842	16	514	8	2,001	35	476	11
Advanced IT or software skills	21,988	21	18,190	21	1,160	18	1,976	35	661	15
Oral communication skills	39,113	38	33,997	39	1,910	30	1,993	35	1,213	28
Written communication skills	33,859	33	28,515	33	2,659	41	1,381	24	1,305	30
Customer handling skills	41,349	40	33,863	39	3,056	47	2,977	53	1,453	33
Team working skills	33,728	33	27,092	31	1,877	29	3,315	59	1,444	33
Written Welsh language skills	1,574	2	0	0	0	0	1,574	28	0	0
Oral Welsh language skills	1,680	2	0	0	0	0	1,680	30	0	0
Foreign language skills	16,773	16	14,601	17	1,451	22	385	7	336	8
Problem solving skills	37,882	37	32,338	37	2,453	38	2,209	39	882	20
Planning and Organisation skills	42,431	41	35,377	41	2,867	44	2,372	42	1,815	41
Strategic Management skills	29,853	29	24,828	29	2,122	33	1,564	28	1,340	31
Numeracy skills	26,775	26	23,194	27	1,866	29	1,149	20	567	13
Literacy skills	30,151	29	25,002	29	1,674	26	2,490	44	985	22
Office admin skills	17,559	17	15,320	18	967	15	797	14	475	11
Technical or practical skills	47,992	46	40,313	46	3,711	57	2,571	46	1,397	32
Job specific skills	68,385	66	56,716	65	5,064	78	4,401	78	2,204	50
Experience/lack of product knowledge	1,668	2	1,523	2	135	2	9	0	0	0
Personal attributes (e.g. motivation, work ethos, common sense, initiative, reliability, commitment, punctuality, flexibility)	2,743	3	2,385	3	314	5	17	0	26	1
Other	911	1	835	1	0	0	13	0	62	1
No particular skills difficulties	7,129	7	5,588	6	148	2	135	2	1,258	29
Don't know	3,777	4	3,459	4	102	2	124	2	93	2
<i>Weighted base</i>	103,453		86,950		6,463		5,650		4,390	
<i>Unweighted base</i>	7,197		5,959		367		482		389	

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012).

Base: All skills shortage vacancies

Table 89 shows the propensity of skills gaps that exist with the Creative Media and Entertainment workforce across the UK at both an employer and employee level. At six per cent, Creative Media and Entertainment employers report the lowest incidence of skills gaps within the UK economy (13 per cent). Interestingly, using the employee base figure, four per cent of the Creative Media and Entertainment workforce are deemed to have a skills gap which is only a percentage point below the UK economy figure.

Table 89: Employers and employees with skills gaps by sector

	Employers with skills gaps				Employees with skills gaps			
	Number	%	Weighted base	Unweighted base	Number	%	Weighted base	Unweighted base
Agriculture, Forestry & Fishing	10,665	10	110,220	1,547	20,149	4	466,870	19,506
Energy Production & Utilities	2,000	16	12,610	1,614	17,250	5	333,050	47,228
Manufacturing	21,520	16	130,709	7,776	148,007	6	2,541,188	291,593
Construction, Building Services Engineering and Planning	31,925	10	306,403	8,961	99,184	4	2,235,270	150,111
Wholesale & Retail Trade	72,233	15	470,200	16,150	300,344	6	4,674,684	514,820
Transportation and Storage	11,540	9	122,058	4,735	55,391	4	1,320,126	114,658
Hospitality, Tourism and Sport	43,000	20	220,055	11,318	193,549	8	2,313,487	258,524
Information and Communication Technologies	6,647	9	72,281	2,510	34,775	6	614,641	53,681
Creative Media and Entertainment	9,155	6	143,772	3,762	41,091	4	1,086,978	87,953
Financial, Insurance & other Professional Services	20,954	12	170,887	5,343	92,599	5	2,052,039	112,945
Real Estate & Facilities Management	13,185	8	166,486	3,424	64,302	5	1,183,601	91,204
Government Services	7,980	15	54,687	2,605	94,735	5	1,780,058	223,796
Education	12,304	19	64,540	5,439	94,884	4	2,538,545	387,221
Health	9,776	19	52,370	3,398	101,986	5	2,004,436	219,765
Care	14,886	17	87,899	4,763	78,458	5	1,504,729	157,681
Whole economy	300,941	13	2,299,921	87,572	1,489,540	5	27,547,123	2,816,693

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012). Bases: All establishments; all employment.

Analysing skills gaps across the UK nations, the levels are broadly similar, but with slightly lower proportions of both employers and employees reporting gaps in Scotland. Compared to the UK economy as a whole, the figures are markedly lower (Creative Media and Entertainment employers in the UK six per cent c.f. 13 per cent; England six per cent c.f. 13 per cent; Scotland five per cent c.f. 16 per cent; Wales five per cent c.f. 13 per cent; Northern Ireland nine per cent c.f. 10 per cent).

Table 90: Employers and employees with skills gaps in the Creative Media and Entertainment sector by nation

	UK		England		Scotland		Wales		Northern Ireland	
	Number	%	Number	%	Number	%	Number	%	Number	%
Employers with skills gaps	9,155	6	8,191	6	551	5	237	5	176	9
Employees with skills gaps	41,091	4	35,672	4	1,803	3	2,305	7	1,311	5
<i>Employer weighted base</i>	143,772		126,071		10,969		4,684		2,048	
<i>Employer unweighted base</i>	3,762		3,301		99		227		135	
<i>Employment weighted base</i>	1,086,978		955,788		69,122		35,216		26,852	
<i>Employment unweighted base</i>	87,953		75,150		4,548		4,872		3,383	

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012). Bases: All establishments; all employment. Note: Treat figures for Scotland with caution due to small base size of establishments.

Skills gaps reported by occupation show very low levels at the managerial and professional levels. The highest percentage within the Creative Media and Entertainment workforce is within the Machine Operative category. These figures, in all cases except Skilled Trades (five per cent c.f. five per cent) are lower than across the whole economy. As already reported, Skilled Trades Occupations is the occupational group employers report most likely to be affected by HTF vacancies.

Table 91: Skills gaps by occupation within the Creative Media and Entertainment sector

	Total employment	Number with skills gaps	% with skills gaps
Managers	320,793	5,700	2
Professionals	156,151	3,699	2
Associate professionals	164,931	6,706	4
Administrative/clerical staff	158,038	6,406	4
Skilled trades occupations	58,336	2,748	5
Caring, leisure and other services staff	*	*	*
Sales and customer services staff	145,522	10,319	7
Machine operatives	23,495	2,716	12
Elementary staff	50,941	2,442	5
Weighted base	1,086,978	41,091	4
Unweighted base	87,953	3,957	

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012).

Base: All employees

* suppressed due to establishment base <25

The biggest consequences of skills gaps cited by Creative Media and Entertainment employers (see Table 92) is an increased workload for other staff (74 per cent) whilst increases in operating costs are also a major and important impact (43 per cent). Given, the sectors reliance on innovation and creativity to remain ahead of competitors, both domestically and internationally, delays developing new products or services (37 per cent c.f 25 per cent for the whole economy) can be seen as an important consequence.

In Wales, similarly to the UK, the biggest consequence of skills gaps for Creative Media and Entertainment employers is increased workload for other staff.

Table 92: Consequences of skills gaps

	UK		England		Scotland		Wales		Northern Ireland	
	N	%	N	%	N	%	N	%	N	%
Increase workload for other staff	4,407	74	3,769	71	*	*	154	92	*	*
Increase operating costs	2,542	43	2,081	39	*	*	66	39	*	*
Have difficulties meeting quality standards	1,771	30	1,572	30	*	*	57	34	*	*
Have difficulties introducing new working practices	1,930	32	1,693	32	*	*	84	50	*	*
Lose business or orders to competitors	1,366	23	1,277	24	*	*	39	24	*	*
Delay developing new products or services	2,216	37	2,040	39	*	*	63	38	*	*
Outsource work	1,027	17	967	18	*	*	18	11	*	*
No particular problems / None of the above	639	11	622	12	*	*	9	6	*	*
Don't know	0	0	0	0	*	*	0	0	*	*
<i>Weighted base</i>	5,947		5,282		*		167		*	
<i>Unweighted base</i>	418		358		*		29		*	

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012).

Base: All employers with skills gaps that have impact on establishment performance

*Data suppressed as unweighted base < 25 (<50 for Scotland)

** Denotes a figures of greater than 0% but less than 0.5%

In terms of the steps taken to overcome skills gaps, Creative Media and Entertainment employers cite increase training activity / spend or increase / expand trainee programmes most frequently (80 per cent of employers). Compared to the whole economy, (see table 94) a greater proportion of employers take the following steps:

- More supervision of staff (69 per cent c.f. 62 per cent)
- More staff appraisals / performance reviews (57 per cent c.f. 55 per cent)
- Implementation of mentoring / buddying scheme (52 per cent c.f. 50 per cent)
- Changing working practice (32 per cent c.f. 31 per cent)

- Reallocating work (40 per cent c.f. 34 per cent)
- Increase recruitment activity / spend (18 per cent c.f. 15 per cent).

There are higher instances of employers stating increased training activity/spend or increase/expand trainee programmes, more supervision of staff, more staff appraisals/ performance reviews, reallocating work and changing work practices among Creative Media and Entertainment employers in Wales than across the UK.

Table 93: Steps employers have taken to overcome skills gaps, Creative Media and Entertainment

	UK		England		Scotland		Wales		Northern Ireland	
	Number	%	Number	%	Number	%	Number	%	Number	%
Increase training activity/ spend or increase/expand trainee programmes	4,582	80	4,040	78	*	*	246	89	*	*
More supervision of staff	3,967	69	3,503	68	*	*	224	81	*	*
More staff appraisals/ performance reviews	3,282	57	2,855	55	*	*	231	84	*	*
Implementation of mentoring/ buddying scheme	3,013	52	2,751	53	*	*	71	26	*	*
Reallocating work	2,322	40	1,913	37	*	*	237	86	*	*
Changing working practices	1,827	32	1,477	29	*	*	215	78	*	*
Increase recruitment activity/ spend	1,014	18	917	18	*	*	25	9	*	*
Recruiting workers who are non-UK nationals	492	9	476	9	*	*	8	3	*	*
Other	39	1	25	0	*	*	0	0	*	*
Nothing	98	2	93	2	*	*	0	0	*	*
Don't know	10	*	10	0	*	*	0	0	*	*
<i>Weighted base</i>	<i>5,761</i>		<i>5,153</i>		*	*	<i>196</i>		*	*
<i>Unweighted base</i>	<i>511</i>		<i>444</i>		*	*	<i>33</i>		*	*

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012). Base: All employers with skills gaps who have taken steps to improve the proficiency or skills of these staff, or have plans to do so

*Data suppressed as unweighted base < 25 (>50 for Scotland)

** Denotes a figures of greater than 0% but less than 0.5%.

Table 94: Steps employers have taken to overcome skills gaps, Whole Economy

	UK		England		Scotland		Wales		Northern Ireland	
	Number	%	Number	%	Number	%	Number	%	Number	%
Increase training activity / spend or increase/expand trainee programmes	185,527	82	155,451	82	3,822	79	18,002	83	8,253	86
More supervision of staff	139,442	62	116,865	62	3,186	66	13,381	62	6,009	62
More staff appraisals / performance reviews	123,245	55	103,336	55	2,939	61	12,001	55	4,968	51
Implementation of mentoring / buddying scheme	113,645	50	94,041	50	2,350	49	12,376	57	4,878	51
Reallocating work	76,053	34	62,381	33	1,952	41	7,876	36	3,844	40
Changing working practices	69,850	31	59,408	31	1,499	31	6,406	29	2,537	26
Increase recruitment activity / spend	33,319	15	28,747	15	762	16	2,386	11	1,424	15
Recruiting workers who are non-UK nationals	21,589	10	18,782	10	572	12	1,373	6	862	9
Other	3,156	1	2,742	1	125	3	221	1	69	1
Nothing	3,541	2	2,736	1	36	1	617	3	152	2
Don't know	348	**	322	0	0	0	0	0	25	0
<i>Weighted base</i>	<i>225,379</i>		<i>189,191</i>		<i>21,730</i>		<i>9,650</i>		<i>4,807</i>	
<i>Unweighted base</i>	<i>16,506</i>		<i>14,313</i>		<i>655</i>		<i>1,074</i>		<i>464</i>	

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012). Base: All employers with skills gaps who have taken steps to improve the proficiency or skills of these staff, or have plans to do so.

** Denotes a figures of greater than 0% but less than 0.5%

5.6.2 Skills that need improving

Evidence from SSC research enables a more detailed look at the precise nature of skills shortages and gaps that exist across the Creative Media and Entertainment sectors in the UK. The following issues are considered to be of paramount importance for sectors at the current time⁴²:

Harnessing and exploiting STEM creatively: The sector is currently suffering shortages of Creative Programmers and Technical Artists. It is evidenced in the recent Next Gen report (Livingstone and Hope, 2011) and the push to transform ICT in the classroom into Computer Science (DCMS, 2011b). This issue has been embedded in Creative Skillset's Media Academies relicensing and also features in HLA work around Technical Textiles, Apparel and Interactive Media. There is also a need to harness knowledge transfer more effectively between STEM subjects and the heritage sector as well as with core "making" skills linked to craft, design and visual arts.

A report by Universities UK declares that:

There is often a false opposition established between 'creative' subjects on one hand, and STEM subjects on the other. However, STEM skills are also needed in the creative economy, whether engineers in broadcasting or Maths and physics skills in computer games development. This is consistently overlooked in current debates that seek to polarise STEM and creative disciplines....Indeed, creative skills are needed in all industries, including those supported by the STEM disciplines. This clearly challenges a narrow view of STEM as the sole route to economic growth" (Universities UK, 2010).

Multi-skilling/inter-disciplinary work: An understanding of different technology platforms and their impact on content development and digital work flow, and new approaches to working in cross-functional creative/technical teams within and across companies. There is a shortage of new people in the sector equipped with 'T-skills'. Many people involved in inter-disciplinary working are employed outside the sector, but provide a vital creative function in another sector. Such skills development may also directly spur innovation in the wider economy (Design Commission, 2011).

Multi-platform skills: An understanding of how to create, market and distribute content across a range of channels, and the ability to understand and exploit technological advances. Further to this, understanding how to cross-over content from live platforms (e.g. dance or cultural heritage sites) into fully interactive and cross-platform outputs.

⁴² Further information on specific skills shortages and gaps by Creative Media and Entertainment sub-sector can be found in Appendix 5

Management, leadership, business and entrepreneurial skills: Especially project management for multi-platform development; the hybrid skills combining effective leadership with innovation, creativity and understanding of technology, and the analytical skills to understand audience interests and translate it into business intelligence. Management and leadership skills are also needed to ensure the growth of micro-businesses employing fewer than five people.

Broadcast technology and engineering: Continuing to be an area of skills shortage due to a combination of lack of new recruits; inappropriateness of provision in further, higher and commercial education; an ageing profile of the workforce; lack of a framework for continuing professional development; and the rapid impact of technological change.

Visual Effects (VFX) is dependent on highly specialised technical and artistic skills: These are in considerably short supply globally. Visual effects companies have traditionally recruited from all over the world to meet the demand for specialised technical roles, and VFX appears on the Home Office skills shortage occupation list.⁴³ That is mainly a failing of our education system – from schools to universities – and it needs to be tackled urgently if we are to remain globally competitive (Livingstone and Hope, 2011).

International markets and co-production/internationalisation of activities and attitudes: The marketplace is becoming more global and many of the issues which drive the sector's skills development are connected to international competition. Key as it is an economic driver of skills demand.

Creative skills: Including skills such as story-writing, musical composition and performance, painting, sculpting and engaging with design concepts. The UK has built a competitive reputation outweighing its size based on these core creative abilities, which are intrinsic to a world-class literature, performing arts, music and cultural heritage sector.

Associate professional and technical skills: Skills shortages and gaps exist in specialist roles including camera, set crafts, complex lighting and technical and backstage roles in live music and performing arts, specialist design skills, heritage and contemporary craft skills, archaeology skills, conservation, graphic design and digital skills. Currently neither HE nor CPD is fully equipping individuals with the technical expertise needed by employers.

Social Media/Marketing/Presentation skills: Every small business needs to understand Search Engine Optimisation (SEO) and marketing themselves via Social Media.

⁴³ Skillset worked with UK Screen to submit evidence in response to the consultation informing the Migration Advisory Committee review of NQF level 4 and above occupations and job titles for the Tier 2 shortage occupation list (June 2011).

Interactive Media skills such as innovation and apps: In a fast changing sector technologically these skills are in huge demand not just within the Creative Media and Entertainment sector but across the whole economy.

Diagonal thinking: The ability to think both literally and laterally. Individuals possessing this skill are innovative and can explain concepts in both rational and emotional terms. They can be highly logical, but link ideas hitherto seen as remote from each other; they want to do work that is creative, but also for it to have a practical impact (IPA, 2008).

Sales and marketing: Important across a variety of sectors including publishing, radio and photo imaging

Archiving: Archiving of digital content being an area which is attracting increased attention as a challenging issue for the future. Metadata training is also a key current challenge in the sector.

Access to Finance and Fundraising skills: Knowing how to access financial backing and preparing initiatives/projects to be ready for investment are crucial skills in an increasingly investment orientated world. Fundraising specifically is relevant to publicly funded cultural sectors such as Performing Arts, Visual Arts and Cultural Heritage.

Foreign language skills: As part of operating in a global marketplace.

Other Business Skills: These include Human Resources competency, financial management and project management.

In addition, awareness of IP and monetisation of multi-platform content is crucial but not a skills need as such. The workforce needs to have awareness of legal frameworks, alternative models, and knowing what to share to gain market position. This is crucial to protect from piracy, and to exploit intellectual property internationally to take full advantage of emerging markets - with particular focus on the ability to deal with the problem of illegal downloading and copyright infringement.

5.6.3 Extent of under-employment

Over-qualification or under-employment refers to an individual whose qualifications and/or skills are greater than required for the role they are employed in. This has been recognised by the UKCES as one of the key variables that contribute to skills imbalances and mismatches (UKCES, 2010e).

A recent research and evidence review conducted by the OECD has found that one quarter of workers within the OECD are over-qualified to do their job whilst one in five of the workforce was under-qualified (OECD, 2011). The study reported that whilst the UK has the lowest levels of over-qualification in the OECD, in terms of over-skilling, this was amongst the highest in the OECD ranking third.⁴⁴

The report brought together several sources and previous studies to quantify the effect of qualification and skills mismatch, all of which have implications for policy makers. The impact of over-qualification and over-skilling were made with:

- **wages:** over-qualified workers are more likely to earn less than their qualifications should allow them to whilst under-qualified workers had a wage premium.
- **job satisfaction:** over-qualified workers were less likely to experience job satisfaction compared to under-qualified workers.
- **retention levels:** over-qualified (or as the research has indicated over-skills) workers were far likely to move on from their current employment

Looking at the employee base measure, the UK Commission's Employer Skills Survey 2011 indicates that 19 per cent of Creative Media and Entertainment employees are seen as over-qualified compared to 16 per cent for the whole economy. Comparing this figure to other sectors of the economy, only employers in the Hospitality, Tourism and Sport sector have a larger proportion of employees who are deemed over-qualified and over-skilled (24 per cent) than the Creative Media and Entertainment sector.⁴⁵

⁴⁴ The reason for this has been ascertained by the authors as being due to issues with skills heterogeneity amongst workers

⁴⁵ Please be aware, that whilst this explanation is based on UKCES data, there are other measures available. For instance, Felstead, Gallie, Green and Zhou (2009), in Skills at Work, 1986 to 2006 observe through analysis of the Skills at Work surveys, there has been rapid growth in the supply of workers holding qualifications at all levels, but slower growth in the numbers of jobs to match the qualifications they hold. This has made "over qualified" or "under-employment" a feature of the UK workforce. Their headline finding was that in 2006, two-fifths of workers held qualifications at a higher level than was required for entry to the jobs they were doing; up from 35% in the 2001 survey. The greatest increase in this measure was at Level 4 and above. **However, they also make the key distinction between qualifications and skills**, (i.e. having a qualification does not mean having the skills whilst some jobs whilst not requiring the qualification from a skills level, tend to help in gaining a job.) The OECD report also offers another alternative, analysing qualifications and job levels.

Table 96 reports that existence of national variations to this picture for the Creative Media and Entertainment sector, with Scotland reporting almost a quarter of the workforce (24%) and Northern Ireland (10%) of the workforce being over-qualified and over-skilled which again is most likely a result of industry composition, given the consistency of qualification composition across the nations as illustrated in Table 48.

Table 95: Extent to which workforce is 'over-qualified' and 'over-skilled' by sector

	Employers with employees who are over-qualified and over-skilled				Employees who are over-qualified and over-skilled			
	Number	%	Weighted base	Unweighted base	Number	%	Weighted base	Unweighted base
Agriculture, Forestry & Fishing	42,111	38	110,220	1,547	88,613	19	466,870	19,506
Energy Production & Utilities	5,458	43	12,610	1,614	43,319	13	333,050	47,228
Manufacturing	56,009	43	130,709	7,776	252,633	10	2,541,188	291,593
Construction, Building Services Engineering and Planning	129,922	42	306,403	8,961	369,923	17	2,235,270	150,111
Wholesale & Retail Trade	241,146	51	470,200	16,150	846,216	18	4,674,684	514,820
Transportation and Storage	61,038	50	122,058	4,735	202,809	15	1,320,126	114,658
Hospitality, Tourism and Sport	131,526	60	220,055	11,318	566,562	24	2,313,487	258,524
Information and Communication Technologies	33,764	47	72,281	2,510	93,637	15	614,641	53,681
Creative Media and Entertainment	66,845	46	143,772	3,762	205,573	19	1,086,978	87,953
Financial, Insurance & other Professional Services	76,826	45	170,887	5,343	312,906	15	2,052,039	112,945
Real Estate & Facilities Management	81,744	49	166,486	3,424	217,791	18	1,183,601	91,204
Government Services	29,384	54	54,687	2,605	256,006	14	1,780,058	223,796
Education	34,623	54	64,540	5,439	341,455	13	2,538,545	387,221
Health	23,566	45	52,370	3,398	225,183	11	2,004,436	219,765
Care	47,114	54	87,899	4,763	258,385	17	1,504,729	157,681
Whole economy	1,118,691	49	2,299,921	87,572	4,456,192	16	27,547,123	2,816,693
<i>Weighted base</i>	<i>2,299,921</i>				<i>27,547,123</i>			
<i>Unweighted base</i>	<i>87,572</i>				<i>2,816,693</i>			

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012). Bases vary. "Employers" columns based on all establishments. "Employees" columns based on all employment.

This pattern may be partly explained due to the Creative Media and Entertainment sector being a desirable sector in which to work with large levels of supply available to employers, and as already demonstrated the workforce is highly qualified (see Table 47). As a result highly qualified graduates may enter the sector in roles such as runners, administration, junior researcher and location assistants. While these roles do not match the qualification levels that these individuals possess and are an example of over-qualification, within the Creative Media and Entertainment sector this is often viewed as a necessary part of career progression with the emphasis on the individual proving their worth and enthusiasm working in the sector; gaining experience of the environment; networking with people already in the sector; and ensuring they are aware of career opportunities that may arise in the future.

To illustrate this, Creative Skillset research reveals that 40 per cent of the Creative Media workforce had undertaken unpaid work within the Creative Media sector in an attempt to further their careers. In addition, 38 per cent had undertaken work experience (at an average of 60.9 days) to break into the sector with only 18 per cent of these having undertaken paid work-experience (Creative Skillset, 2010b).

This relates to the UK Commission's Employer Skills Survey 2011 findings explored earlier in the chapter that demonstrated hard-to-fill vacancies are less likely to be caused by a low number of applicants generally (six per cent for Creative Media and Entertainment c.f 12 per cent for the whole economy) whilst also reporting that there are far fewer employers citing not enough people interested in doing this work as a reason for retention difficulties (36 per cent c.f 51 per cent) which again highlights the attractiveness of the sector to potential new recruits and employers having an available supply willing to work at all levels within the sector.

Creative Media and Entertainment employers are more likely than employers within the economy as a whole to have retention difficulties caused by wages offered being lower than other firms (40 per cent c.f 33 per cent) and unattractive conditions of employment (33 per cent c.f 25 per cent). Illustrating the point made in the OECD study regarding job satisfaction and retention levels associated with over-qualification and/or skilling, Creative Skillset's Creative Media Workforce Survey 2010 reports that whilst only seven per cent of the workforce felt they would be leaving the Creative Media sector in the next 12 months, a lack of promotion or career opportunities and a low pay rate were identified as the major factors behind this decision (Creative Skillset, 2010b).

On the supply-side, a recent CEDEFOP publication has linked the proliferation of Higher Education supply as one of the main contributory reasons for the current over-supply of qualifications which is pertinent for the Creative Media and Entertainment sector (CEDEFOP, 2011). Research undertaken by Creative Skillset confirms the extent of this over-employment and recognises how the Creative Media and Entertainment sector benefits from a large number of university students taking courses in higher education relating to the Creative Media and Entertainment sector. Mapping of Higher Education students to courses relevant to Creative Skillset's footprint revealed 379,258 students on courses in subject areas relevant to the industry in 2009/10 (Creative Skillset, 2012). In addition to this, there were 145,168 students on courses in Creative & Cultural Skills related subject areas. The Working Futures data for 2010-20 estimates a net workforce requirement of 277,000 employees during this period due to expansion demand (without taking into account replacement demand requirements) within the Creative Media and Entertainment sector (UKCES, 2011b).⁴⁶ This data therefore illustrates the large potential over-supply within the labour pool that employers within the Creative Media and Entertainment sector have available.

⁴⁶ Expansion demand is discussed in detail within Chapter 7.

Table 96: Extent to which workforce is 'over-qualified' and 'over-skilled' by sector and nation

	UK		England		Scotland		Wales		Northern Ireland	
	N	%	N	%	N	%	N	%	N	%
Agriculture, Forestry & Fishing	88,613	19	65,776	18	†14,421	†26	6,304	20	2,112	9
Energy Production & Utilities	43,319	13	24,398	10	16,430	27	1,492	9	1,000	14
Manufacturing	252,633	10	207,252	10	23,989	12	10,438	8	10,953	13
Construction, Building Services Engineering and Planning	369,923	17	322,354	18	26,150	11	11,605	13	9,813	14
Wholesale & Retail Trade	846,216	18	706,922	18	84,085	23	29,870	15	25,339	18
Transportation and Storage	202,809	15	174,327	15	19,364	17	5,532	14	3,586	13
Hospitality, Tourism and Sport	566,562	24	469,544	24	61,407	27	21,939	22	13,672	22
Information and Communication Technologies	93,637	15	82,478	15	†6,789	†22	2,486	13	1,883	18
Creative Media and Entertainment	205,573	19	180,207	19	†16,895	†24	5,726	16	2,744	10
Financial, Insurance & other Professional Services	312,906	15	273,503	15	25,942	19	5,851	11	7,611	20
Real Estate & Facilities Management	217,791	18	190,600	18	†16,587	†23	8,312	25	2,292	10
Government Services	256,006	14	209,697	14	25,177	14	11,208	12	9,923	16
Education	341,455	13	283,067	13	26,749	14	21,757	19	9,882	14
Health	225,183	11	203,155	13	11,177	5	7,399	6	3,452	8
Care	258,385	17	219,433	18	20,636	15	9,128	15	9,188	12
Whole economy	4,456,192	16	3,612,713	16	395,798	17	165,139	14	117,410	15
<i>Weighted base</i>	27,547,123		23,198,476		2,381,601		1,182,314		784,732	
<i>Unweighted base</i>	2,816,693		2,345,213		201,868		178,922		90,690	

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012).

Base: all employment

† Treat figures with caution due to small base size of 50-99 establishments in Scotland

5.7 Impact of mismatches

5.7.1 Wages

As we have established, the Creative Media and Entertainment sector is one which is highly competitive to break into with a large number of graduates working within various occupations within the sector. Research indicates that the over-qualified (for example, tertiary graduates in jobs requiring upper secondary qualifications) earn 20 per cent less than workers who hold their same qualifications but have found a job that matches such qualifications (OECD, 2011).

Whilst wage rates are high within the Creative Media and Entertainment sector, as demonstrated by Table 72, there does remain disparity within the sector and highlights the extent of wage mismatch to qualifications that occurs within the sector.

This is highlighted through more detailed analysis of comparable ASHE 2010 information at an occupational level. For instance, the hourly mean wage of a graduate level position such as Media Associate Professional is £17.49. Yet demonstrating the wide disparity of wages despite the skill levels required, the median hourly rate is £14.94 with the lowest 10th percentile earning £9.13. This is also the case for Design Associate Professionals earning on average £13.43 with a median of £12.63, yet the bottom 10th percentile earn £8.75 (ONS, 2010).

5.8 Migration

While the nurturing of new talent with the skills required is a long-term objective, employer requirements for highly-skilled individuals available to work within the Creative Media and Entertainment sector remains. Whilst the sector attracts highly qualified individuals into Creative Media and Entertainment employment, the shortage of ready available talent with the skills to help drive innovation and growth within the sector is a key concern in some particular areas. This demand for skills that the domestic market cannot supply is reflected within the MAC exemption list. Illustrating the extent to which highly technical and creative skills that are crucial to sector performance are in short supply, four four-digit SOC codes remain on the MAC exemption list all of which are highly skilled and high salaried job roles (Creative Skillset, 2010b). These are 2132: Software Professionals; 3411: Artists, 3416: Arts Officers, Producers and Directors and 3421: Graphic Designers (please see table 24 for example roles these relate to). This shortage is significant as in a globally competitive environment; sectors which rely on these occupational skills are losing ground to overseas competitors (Livingstone and Hope, 2011).

5.9 Extent to which skills deficiencies are hampering growth

The UKCES, in its World Class Skills publication that outlines the ambition for the UK to become a top eight country, recognises that *“the UK’s prosperity and our competitiveness, in the long run, depends on jobs and productivity: how many people are in work and how productive they are. Skills are vital to both”* (UKCES, 2010f). In the case of the Creative Media and Entertainment sector, this is paramount for ensuring the performance and growth potential of businesses.

A recent report by The Work Foundation illustrates how while the UK Creative Industries have performed exceptionally in recent years, they are now under threat from the combination of “recession induced cuts, the global trends towards convergence and digitalisation, and concrete actions from other governments to maximise the recovery boosting economic performance of their own creative industries” (Reid *et al.*, 2010). While the three long-term drivers of convergence, digitalisation and internationalisation have been recognised to have changed the shape and approach of the Creative Industries. These all offer opportunities for the UK creative industries and ensuring that the sector has the right technical and generic skills at its disposal will be paramount to maximising the growth potential these bring through ensuring the UK remains at the cusp of innovation and the exploitation of new markets.

As explored previously in this chapter, the existence of skills shortages and gaps has great consequences on the sectors ability to compete. The impact of these issues on the Creative Media and Entertainment sectors ability to compete on a global level has been recognised with the formation of a Creative Industries Council Creative Skillset Skills Group to support growth.⁴⁷

As already reported in this document, the UNCTAD highlighted that the UK's Creative Industries in 2010 were worth 5.8 per cent of the UK's overall GVA, a figure higher than for equivalent analysis of Australia, Canada, France and the United States. The UNCTAD analysis of UN COMTRADE data also indicated that the United Kingdom in 2008 was the sixth biggest global exporter of creative goods, exporting \$19.9bn, an increase from \$13.7bn in 2002 and a market position of seventh (UNCTAD, 2010).

However, it is noteworthy that many countries are now catching up, especially within developing nations and have enjoyed greater levels of export growth during these years. While the UK levels of growth in exports were a respectable looking 6.5 per cent, of the top 20 exporting nations, all but four experienced lower levels of growth than the UK (UNCTAD, 2010).

Two recent reports further demonstrate how growth is being hampered by this phenomenon. The DCMS recent Film Review recognised that the UK had strengths in areas including cinematography, craft grades and visual effects (VFX) and that these strengths are crucial both to attracting inward investment and supporting indigenous production. However, it was recognised that investment in skills was essential if the work of the British Film Commission and Lottery Investment in film was to be maximised (DCMS, 2012).

In an era of globalisation, competition from overseas is increasingly fierce across the value chain, especially from emerging markets where labour costs are much lower. A long-term programme of investment in skills and talent across the film sector is essential if we are to retain our leading position in film. (DCMS, 2012, p.67).

⁴⁷ <http://cicskills.skillset.org/>

The visual effects sector was also subject to a recent review (Livingstone and Hope, 2011), where it was acknowledged that the UK video games industry had dipped from third to sixth place in the global development rankings. It also noted that while the VFX sector, though still enjoying very rapid growth, is having to source talent from overseas because of skills shortages at home and that failings in our education system need to be tackled if we are to remain globally competitive. Whilst this is a sign of the market working correctly in terms of attracting talent to fill short-comings in supply, there are major implications for future competitiveness if other countries are able to support an indigenous supply and make moves to challenge the UK as a centre of VFX a real one. The report recognises that there are severe misalignments between the education system and what the UK video games and VFX industries need, in that while there is an over-supply of graduates, their skills are not what is required by video games and video effects employers, leading to indigenous skills shortages with many having to recruit overseas instead, putting at risk the UKs high-tech creative industries.

6 Drivers of change and their skills implications

Chapter Summary⁴⁸

- In terms of regulation and governance, the Creative Media and Entertainment sector is firmly positioned as a key driver of economic growth and economic recovery. Funding from the public sector to support skill and sector development will benefit the sector – for example UK Government investment in higher level apprenticeship places. On the other hand, reduction in funding of the BBC and ‘legislative creep’ coupled with increasing regulation will pose challenges for the sector.
- Demographic change is critical as the sector continues to under-utilise segments of the available labour pool. In particular, older women are leaving the workforce as they experience challenges with having a family and working in the sector, while many sectors rely on a predominantly young labour force in the context of an ageing population.
- Environmental change is less of an issue within the sector but nevertheless the design industry, alongside others, is crucial to supporting the huge occupational surge towards the low carbon and green economy.
- Competition within the UK and abroad is intense for the sector so economics and globalisation are a key driver. The marketplace is becoming more global and many of the issues which drive the sector’s skills development are connected to international competition.
- Technological change remains a central driver within the sector. The UK’s knowledge economy, in which Creative Media, financial services, health, education and high–medium tech manufacturing form the core, is driven by increasing levels of innovation and co-production with users and customers. Divergence through the multiplicity of screens/platforms through which content is consumed is central as is the pace of change and innovation in new technology.
- The values and identities attached to freelancing as a working pattern are also crucial with those entering the sector more likely to work as freelancers than they were in the past.

⁴⁸ NB: Figures from official data sources (e.g. Labour Force Survey and Employer Skills Surveys) prevent analysis of key segments of the Creative Media and Entertainment sector. For further information on this see section 1.4.

- Consumer demand is a driver within the sector, particularly with the rise in the use of social networking sites such as Facebook and Twitter, TV online and the development of smart phones. New media and channels have shifted the possibility of communication and purchase at any time of the day or night.
- There has been a marked shift towards multi-skilling within the sector. Driven by a need to become more productive whilst working within tighter budgets, multi-skilling is particularly prevalent where there is a need for employees to be able to carry out a range of technical roles that would previously have been delivered by a team.

6.1 Drivers of change

This chapter provides an overview of the main drivers of change in the Creative Media and Entertainment sector and how these drivers might influence skills demand and supply in the future. The following diagram, relevant to the economy as a whole, sets out a core set of seven drivers of change as described in the UKCES' National Strategic Skills Audit evidence report.⁴⁹

Figure 1: Drivers of change



Source: National Strategic Skills Audit 2010, UKCES

The following summarises how each of these drivers is pertinent to the Creative Media and Entertainment sector. Each is introduced and defined using the UKCES standard defining text (UKCES, 2010a), explains how the driver relates to the Creative Media and Entertainment sector and finally the potential impact this driver will have.

⁴⁹ See <http://www.ukces.org.uk/ourwork/nssa> for further discussion of drivers

6.1.1 Regulation and multi-level governance

Definition

Regulation and multi-level governance: covering management of borders between states, threats to (inter)national security, changes in global power, national and international conflict, domestic regulation. Regulation can have an important influence on skills supply because it may affect labour supply through controlling entry to, and exit from, education and the labour market, and can influence skills demands through setting of either training, product or service standards.

How this driver relates to the Creative Media and Entertainment sector

Strategic support in government and the position of the Creative Industries in economic development policy - the political will exists to support the development of the sector. Given the current economic climate and deficit reduction plans, this is likely to be crucial to ensuring continued availability of funding.

In some key sectors there is an issue related to **loss of talent** due to the draw of other countries whose **governments offer tax breaks and other fiscal incentives** to lure producers to site their operations away from the UK. Countries such as France and Canada already offer attractive incentives through their tax system to the games industry and this offers greater protection to those businesses that are based in Canada and an incentive to UK-based industries to de-camp there.

Funding from the public sector to support skill and sector development – for example UK Government investment in higher level apprenticeship places will benefit the sector, particularly creative SMEs.

Increasing tuition fees – the decision to charge fees of up to £9,000 per year will doubtless impact on the sector as it will others.

Reduction in funding allocated to the BBC and subsequent strategy and commissioning plans – economic challenges and fiscal constraints on public expenditure have led to the BBC license fee being held at the same level for the next six years. This will result in a cut in real terms of 16 per cent during this period.⁵⁰

Reduction in funding for the wider arts infrastructure in the UK - the grant-in-aid funding cut of 29.6 per cent to Arts Council England, and the subsequent 15 per cent cut in

⁵⁰ <http://www.bbc.co.uk/news/entertainment-arts-11580968>

funding for National Portfolio Organisations in the period 2011-2015 presents a significant challenge to the production and sustainability of the wider arts landscape, which has a direct impact on the economic performance of the Creative Media and Entertainment sector.

The localism agenda – following on from the Nicholas Shott Review (Schott, 2010), the UK Government published the New Framework for Local TV (DCMS, 2011c), which lays out how the Government will facilitate the creation of a new generation of local TV services. The Government is committed to decentralising broadcasting to increase localism and plans to have 15-20 local TV services in operation by 2015.⁵¹

Legislative creep and increasing regulation – will also impact on the sector e.g. on advertising of tobacco, alcohol, and certain types of food or drink mean advertisers will have to get better at developing more responsible campaigns identifying consumer risks as well as consumer opportunities.

Impact of this driver

The financial and political constraints faced by publicly funded organisations and cultural institutions mean that occupational growth mainly occurs in the private sector until 2015; significant job cuts will be seen in the public sector. In an attempt to replace lost income, fundraising and business development occupations in the public sector will grow at an increased rate – necessitating an increase in fundraising, communication and engagement skills to match demand.

While higher education qualifications at level 4 or above will remain the dominant route into the sector, the main shift will be towards vocational qualifications, manifested in Apprenticeships as a result of public sector funding. This change will allow for skills shortages in occupations relating to creative media, fashion and textiles, film set crafts, photo imaging, fashion and textiles, technical theatre, backstage and offstage to be satisfied. Employers will increasingly employ people on the basis of having the correct skills rather than a certain qualification.

⁵¹ http://www.culture.gov.uk/what_we_do/broadcasting/7235.aspx

Both extremely specialised, highly skilled occupations requiring level 4 and above skills and specific technical occupations that occur at level 3 will be in high demand. Creative Skillset is in fact already developing a Level 4 Apprenticeship with pathways in advertising, creative & digital media and fashion & textiles, creating 500 Apprentices by 2015. The number of creative level 3 Apprenticeships being undertaken will also increase both amongst young people and adults (funding for apprenticeships is for 16-19 years old), as individuals seek to up-skill or re-skill in order to enter into specific roles within the sector.

This shift towards vocational qualifications is just starting, with new Apprenticeship frameworks being created currently that will lead to greater numbers and greater choice. This popularity will grow, also facilitated by higher education policy under which Higher Education (HE) qualifications are more expensive to the individual. Internships will continue to be a way attractive to some employers, with specific training that can only be achieved through bespoke work in the workplace. Also, as applicants outnumber places available, young enthusiastic entrants will see unpaid work as a way to prove themselves, and this will continue to have a deleterious effect on diversity in the workforce.

Creative Apprenticeships developed by Creative & Cultural Skills have reached a point where approximately 300 apprentices are trained sustainably each year in live music, performing arts and broader cultural occupations. The extension of the National Skills Academy model in cultural heritage and design, and across the UK nations will also facilitate apprenticeship take-up across a broader spectrum of the sector. Creative Skillset has diversified its Apprenticeship offer, with a new Creative and Digital Media App in Wales, a Fashion and Textiles Heritage Modern Apprenticeship in Scotland, and a Film Set Crafts Apprenticeship in England, making a total of eight Apprenticeship frameworks across the UK: http://www.skillset.org/qualifications/apprenticeships/Which_Apprenticeship/

As the availability of and participation in apprenticeships increases, employers will need support in order to deliver them effectively. There should be an improvement in technical skills and potentially an improvement in business skills (gained by exposure to business management at the outset of career).

The impact of increased tuition fees has led to a significant drop in the number of applicants to creative art and design courses, which have dropped by 16.3 per cent from the 2010/11 academic year.⁵² The effects of this reduction in applicants is unknown but there is potential for a lack of diversity in the student population. This would undoubtedly impact on employment in years to come but this is hard to predict at the current time.

The impact of the economic environment that sees more generous tax breaks overseas, with mean that in the long term, other countries will become an attractive proposition for UK talent. This may mean on the demand side employers will have replace highly skilled personnel, whilst on the supply, requiring the skills supply to be reactive to their needs.

The localism agenda will require employers who are impacted by this legislation to understand their product markets, ensure content conforms and is suitable for the target audience the Government agenda has in mind.

6.1.2 Demographic and population change

Demographic and population change: covering the impact of global population change; relative changes between advanced, developing and transitional nations, changes in the age profile of populations, migration pressures, infertility and life expectancy. Demographic change can be an important influence on skills needs because it can affect labour supply through population change and location of different sources of labour, and population change in itself can lead to increases and decreases in consumer demand for different kinds of goods and services, leading to expansion and contraction in related job volumes.

How this driver relates to the Creative Media and Entertainment sector

Demographic change is a key driver for the Creative Media and Entertainment sector as the need for increased levels of diversity as a business driver will grow in the future since content needs to reflect the more disaggregated and global marketplace.

Below average participation in the workforce by women – given that (in the majority of cases) women continue to undertake primary care roles within the family (either for children or other relatives) the restrictions placed on them by working patterns are likely to continue to limit their participation in the workforce. Despite the fact that more women than men are freelancers, women tend to be employed in sectors with more stable, permanent employment models (Creative Skillset, 2010c).

⁵² UCAS, 2012 Applicant Figures – January (2012)

Impact of this driver

Diversity within the workforce as a result of the continued under-representation of women will require action in terms of looking at interventions that can be made to resolve work life balance issues facing many women in the sector.

6.1.3 Environmental change

Environmental change (whether due to natural causes or human agency): covering climate change, pollution, changes in demand levels for different types of energy; availability and use of water and food; development of cities versus rural areas; disease and deforestation. Environmental change may lead to skills needs as a result of government policy and investment to tackle climate change through stimulating the development of a low carbon economy.

How this driver relates to the Creative Media and Entertainment sector

Environmental change is a driver that is perhaps less relevant to the sector than others. It is probable that government procurement and private sector investment will continue to be increasingly focused on the green economy. The ability of the **sector to help tackle large societal and environmental problems is increasingly recognised**. The design industry, alongside science, technology, engineering and mathematics becomes crucial to supporting the huge occupational surge towards the low carbon and green economy.

Impact of this driver

Occupations and businesses in the design industry which support work on these large-scale issues will grow, with a new green bank being established for SMEs to access finance to undertake work in this area (Levy, 2010). Whilst the scale of impact is not strong within Creative Media and Entertainment, companies will also have to show greater awareness of this agenda and demonstrate their credentials to helping achieve this agenda.

6.1.4 Economics and globalisation

Economics and globalisation: including rate of overall economic growth, distribution of wealth between individuals and nations, management practices and structure of organisations, nature of the workforce and international trade. Economic growth in developing economies may create pressure on the UK and England to move into higher value-added markets, which may lead to increasing demands for higher level skills in some

jobs, and place demands on capacity to adapt to the requirements of emerging overseas markets.

How this driver relates to the Creative Media and Entertainment sector

Despite unrivalled economic performance and their rightly celebrated strengths, the sector is under threat from a combination of **recession induced cuts, the global trends towards convergence and digitalisation, and concrete actions from other governments to maximise the recovery-boosting economic potential of their own creative industries.** Action therefore needs to be fast to allow the sector to achieve its full potential as a driver of growth and innovation (Reid *et al.*, 2010).

Recovery from recession – as the UK (and the rest of the world) emerges from the recession there will be increasing economic pressure driven by deficit reduction plans and associated cuts in public expenditure. Research has shown that as the UK moves out of recession, the importance of the Creative Industries is even more evident, being positioned firmly as a key driver of economic growth and recovery.

Economic growth – the rate of growth in the economy is key to anticipating the likely performance of the sector. For instance, drivers such as advertising revenues and individuals ability to buy content are key to sector growth.

Competition and globalisation – competition within the UK and abroad is intense for the sector, including an increasing range of foreign competitors with access to the UK market. The marketplace is becoming more global and many of the issues which drive the sector's skills development are connected to international competition.

Opening up to international collaborations and a global market – in all formats across all media. Also an increasing potential for sourcing services from the UK to overseas (off shoring).

The recession has seen a tightening of budgets and the economic climate Creative Media and Entertainment employers now operate in requires employers to **ensure their activities reflect value for money.**

Impact of this driver

It is likely that as convergence increases, competitive boundaries will become increasingly blurred. The common feature of the global opportunities presented by new and developing technology is that they will be beyond the scope and scale of almost all single companies,

even large established multinationals or conglomerates. Alliances and partnerships will therefore need to be formed for opportunities to be realised, commonly with companies in technology and telecoms, and sometimes with companies that will be competitors in other markets.

Supply chains will necessarily lengthen and the freelance and contract based nature of so much of the Creative Media and Entertainment sector will offer both opportunity and threat to the sector. Supply chain and project management will become an increasing skill need for Creative Media and Entertainment organisations.

The Creative Media and Entertainment sector has tended to attract high levels of public investment. As a result of the current economic climate it is likely that there will be a streamlining of schemes being delivered and a drive for improved performance for those being funded. Demonstrable impact and legacy of funding is crucial, the requirement for strong evidence around this is likely to increase.

Recent estimates point to growth in output and employment and a pattern of slow productivity growth. The latter is perhaps the most pertinent to reflect on in the context of skills. In order for the sector to become more productive and improve the level of output, it will be essential to up skill the existing workforce and improve the skills of new entrants to ensure the input from each group is most effective. There is recognition that an important element in improving performance is supporting effective working relationships between education institutions, the public sector and industry.

Additionally, the international nature of competition and markets creates pressures on the sector to develop and demonstrate the right skills (particularly sales and marketing) to attract and develop business opportunities abroad.

Due to the consistent oversupply of graduates to the sector, creative occupations in non-creative sectors will continue to grow. This is also in part due to increasing recognition by non-Creative and Cultural industries of the importance of creative thinking in innovation and the role it can have in driving more general economic productivity (Higgs *et al.*, 2008). More generic employability and workplace skills are therefore in increased demand from those in creative occupations outside the sector.

In order to unlock the growth of the sector the Creative Industries Council Creative Skillset Skills Group have made a number of recommendations. They are grouped into five broad headings, namely (Creative Industries Council Creative Skillset Skills Group, 2012):

- Continuing professional development and nurturing the business leaders of the future;
- Inspiring the next generation of creative talent and equipping them with the right skills and information;
- Increasing and enriching pathways, so that talent from all backgrounds can enter and prosper in the Creative Industries;
- Bringing information to market: co-ordination to meet knowledge gaps and making robust data and intelligence available for all;
- Reducing the bureaucratic burden, joining up investment and clarifying roles.

6.1.5 Technological change

Technological change (including new developments and new applications of existing technologies): covering development of biotechnology, nanotechnology and AI (Artificial Intelligence), digital communications and IT. The development of technologies may create demands for skills at higher levels in research and development (R&D), and at lower levels in manufacturing new products devised, while there may also be skills needs requirements in supporting consumers to use new technologies.

How this driver relates to the Creative Media and Entertainment sector

The UK's knowledge economy, in which Creative Media, financial services, health, education and high–medium tech manufacturing form the core, is driven by increasing levels of innovation and co-production with users and customers. Such co-production enables the Creative Media and Entertainment sector to respond more quickly to new developments.

Multiplicity and convergence of screens/platforms through which content is consumed – divergence is also a driver in the sector. This links to STEM as companies need to be aware of the unique properties of each screen/platform. Most notably, Smart TV or Over The Top (OTT) TV promises a new way for games and interactive media to permeate into the family living room - a combination of various content in one portal e.g. games, films, TV, internet, shopping, news all in one place. This will change the way media/content is consumed, examples include Ultraviolet and GoogleTV

The pace of change and innovation – developments in new technology are becoming so rapid that they are changing markets and can allow new businesses to flourish (and also disappear) quickly. For instance, recent developments include the rise of interactive content

and second screen technologies that allow the individual to participate with content is an example of these developments.

New models for distribution and ‘transmission’ to audiences and clients – the move towards multi-platform business models and the move away from more traditional business models has caused and is causing unprecedented challenges within digital media businesses.

Access to broadband – the Creative Media and Entertainment sector will benefit from a UK Government commitment to an overhaul of development and planning rules to support superfast broadband roll-out. This is expected to substantially reduce burdens of the communications and media regulatory framework (HM Treasury and BIS, 2011).

Intellectual property regulation – the Hargreaves Review, published in May 2011 sets out 10 recommendations to ensure that the UK’s intellectual property framework supports growth and innovation (Hargreaves, 2011). Ministers have accepted the recommendations made in an independent review which estimate the potential to deliver up to £7.9bn to the UK economy (HM Government, 2011). If challenges remain unresolved, they could potentially block a whole market to a new digital product or service. These challenges include the monetisation of content, quality, resilience, trust, interoperability, security and inclusion.

Impact of this driver

The possibilities that are available because of super fast broadband and technological developments to the Creative Media and Entertainment sector are potentially huge. The rise of social media has provided digital and creative sectors with new ways of accessing markets and engaging with audiences/clients. All of the digital media sectors will have a requirement to use new technology and keep their skills base current, this is a challenge for education and training providers who need to keep ahead of the fast moving developments in digital media.

The implementation of infrastructure enabling wide-scale access to super-fast broadband will open the online market to those currently barred due to inadequate internet speeds; it will also increase the feasibility of relocation for creative businesses to regional bases outside of London in order to lower operating costs. The spread of occupational growth will therefore be wider, although creative clusters of high occupational density will remain in current hotspots; including London, Manchester, Edinburgh and the East of England (De Propris *et al.*, 2009).

Developments in digital technology will result in higher growth rates for occupations having a strongly digital element. ICT skills will also be in increasingly high demand as businesses and organisations continually integrate new technologies into their operations (BIS and DCMS, 2009).

The Creative Media and Entertainment sectors most affected by rapid technological change are those utilising digital technologies such as content for animation, film, television and visual effects. The UK has the largest visual effects industry outside Hollywood. 3D will fast become the industry norm in television as well as film and skills will be required to keep pace with this.

Digital technology has also had a major impact on the design sector, including shortened design timescales, faster communication, the emergence of rapid prototyping and businesses requiring fewer people carrying out more tasks. The majority of designers think skills needs are changing and the most commonly cited reason is technological advance (NESTA, 2009), and the system which produces high quality design practitioners needs to adapt to keep apace.

Changes to legislation and general digital infrastructure will see the rapid growth and democratisation of content creation and online services (NESTA, 2009). The music sub-sector will experience growth from increased legal protection, allowing independent hobbyist labels to achieve modest growth. Alongside this, content creation for cultural heritage, certain areas of design and the digitalisation of literature will all create occupational growth in their individual sectors.⁵³

Those with day to day interaction with technologically advanced equipment in the footprint will need to be kept up to date with technology or software as a result of the fast pace of change. All sub-sectors will have a requirement to use new technology and keep their skills base current, this is a challenge for education and training providers who need to keep ahead of the fast moving developments in digital media.

Another impact of technology has been the creation of new business models which reduce (or in some cases remove) the role of traditional distributors, broadcasters and publishers. This allows small companies to have more direct relationships with their audiences/clients providing new opportunities for new routes to market and audiences. The subsequent

⁵³ The Economist, The Future of Books, http://globaltechforum.eiu.com/index.asp?layout=rich_story&channelid=5&categoryid=15&doc_id=10370

impact in terms of skills is the ability to engage directly with the market in order to sell and monetise products and content.

Intellectual property regulation will mean that skills and awareness are required to manage digital rights inventories, license revenue streams and access royalty payments efficiently and profitability. In the new digital marketplace where there are few barriers to entry, and fewer and fewer gatekeepers, skills such as Search Engine Optimisation (SEO) and ways to ensure 'discoverability' are at a premium. Whilst large companies may have whole departments to deal with this sort of marketing, SMEs, sole traders and micro-companies will increasingly need to assimilate these skills into their everyday work.

STEM

As a result of the commercialisation of content on new platforms it may become increasingly important to provide the opportunity for producers of 'traditional' content to understand the new platforms and skill themselves appropriately to access new markets and the opportunities that arise from them. This links to STEM as the unique properties of each platform need to be understood fully. New technology has also brought with it challenges associated with revenue. For example, TV companies have seen advertising revenues reduced by digital TV technology (which can skip adverts) and the rise of internet TV.

Due to the ever increasing complexity of digitally consumed products, the expertise of programmers has increased to meet demands caused by the need for connectivity and availability across a number of platforms. The demand for higher skills in programming comes as levels of Maths, Physics and Computer Science take up at Schools and universities has caused alarm for employers and educationalists alike. The Government has been keen to promote the needs for increased STEM skills in students as illustrated by the push for Computer Science to replace ICT in school's curriculum (DCMS, 2011b), and the rising profile of organisations like STEMNET, a BIS funded network creating opportunities to inspire young people in STEM.

Whilst STEM has gained prominence as a key driver of talent in Creative Media and Entertainment, there is also a growing understanding that coding alone isn't the solution; but rather how it is applied to imagery, manipulates it, and works with it to draw in the user. Thus, to highlight and not forget the value of art and design, several commentators have started to use the acronym STEAM where the A is for Art. For example a film's story is only realised through multiple hardware technologies.

6.1.6 Changing values and identities

Changing values and identities: covering family structures, attitudes towards government, citizenship, education, religion. Changes in values and identities will include attitudes to work and may therefore affect labour supply through influencing choices about type and conditions of work.

How this driver relates to the Creative Media and Entertainment sector

Changing values and identities impact on the sector to the greatest extent in relation to attitudes about work and the benefits offered by freelance working:

Freelancing as a working pattern – those entering the digital media sector are now more likely to work as freelancers than they were in the past. This allows employers to employ the correct skills they require as and when projects demand whilst allowing the individual to have control over their working patterns and choice of assignments they pursue.

Given the sector embraces technological advances and is seen as creative and innovative, this leads to a high supply of graduates looking to enter the industry as well as allowing the industry to remain an attractive career choice as such creativity and innovation become self-perpetuating.

This driver is also represented by the local TV agenda, which is looking to create viable local television provision and content which aims to reinforce community identity, hold local institutions to account and encourage local political engagement (DCMS, 2011b).

Skills implications of this driver

Challenges relate to the need for individuals working in the sector to understand the requirements of self employment and to be able to gain work in a competitive marketplace. If the number of freelancers increases, natural competition between them to improve and innovate in order to be the best (as between organisations) should also drive up the skills base.

The absence of many large firm employers, and the large number of small firms and freelancers in particular (Creative Skillset 2009 and Creative Skillset/UK Film Council 2008), makes it a difficult sector to influence through public policy. Employers with larger number of employees generally have greater requirements placed on them than smaller ones, and equal opportunities and other legislation apply more comprehensively. More specifically, when recruitment and promotion criteria are as informal as they are in the sector, it's

sometimes difficult for public policy to gain any firm purchase on labour force development issues (Oakley, 2009).

Responding to the local TV agenda, there will be increased emphasis on Creative Media and Entertainment employers within this sector, specifically creating content with the local audience in mind.

6.1.7 Changing consumer demand

Changing consumer demand: covering changing consumer choices and expectations about type and quality of products and services. The development of niche consumer markets, consumer preferences for tailored goods and services and rising consumer expectations about service quality may lead to skills needs within a variety of segments of the service sector.

How this driver relates to the Creative Media and Entertainment sector

Consumer demand is also important within the sector with one stand out driver associated with it:

Consumption and sharing of information in online communities – the rise in the use of social networking sites such as Facebook and Twitter, TV online and the development of smart phones is altering the way in which society accesses information. New media and channels have shifted the possibility of communication and purchase at any time of the day or night. An increasingly networked society means that a greater number of links are possible between a given consumer or company, and other consumers or companies, for less effort. Consumer demand for novelty in products and experiences places an onus on manufacturers and service providers to innovate more quickly and in a more targeted way. In a prolific multi-media world, entertainment is increasingly seen to be the key to breaking through the clutter, and the best way to ‘engage’ the more flighty and technology-savvy consumer of the future. Media owners, advertisers and agencies, will be increasingly challenged to engage on a human level, in order to capture an audience.

Audience fragmentation – is also driving growth in demand. According to figures from PwC over the next four years to 2014 Internet Advertising will grow by 10.5 per cent and advertising in video games will grow by 13.7 per cent. This compares with 4.3 per cent for TV advertising and reductions of 1.2 per cent for Newspapers, 11.9 per cent for Print Directories and 1.3 per cent for Trade magazines (Stokes, 2010).

Skills implications of this driver

Globally (and across sectors) the increasing consumption of social media and online information sharing is changing business models. This is particularly pertinent to the digital media sector, where so much of the content can be created/distributed/consumed online. Social media sites such as Facebook and Twitter have opened up their platforms to individuals and businesses to create Apps and have created and developed the structure to support the commercialisation of these applications. The key conclusion is that digitisation and platform proliferation are enabling the end-user far more control over when, where and how they access content.

6.2 Additional drivers of particular relevance to sector and the impact they have on employment and skills

A number of other drivers specific to the Creative Media and Entertainment sector exist outside of those outlined in section 6.1.1. They are:

Multi-skilling increasingly demanded in the workplace - there has been a marked shift towards multi-skilling within the digital media sector. Driven by a need to become more productive whilst working within tighter budgets, keeping costs to a minimum multi-skilling is particularly prevalent where there is a need for employees to be able to carry out a range of technical roles that would previously have been delivered by a team. This will also allow companies to be more ambitious with revenue generation as they will possess employees able to work within different parameters. Conversely, the individual possessing these skills will mean they are more likely to be employable and possess skills the employer within the sector will appreciate.

In terms of skills the sector is likely to see the **creation of 'new' occupations as organisations (and individuals) increasingly combine skillsets** that previously would have been separate jobs. However, moving towards a 'jack of all trades' model could reduce the pool of real specialists that there are in specific disciplines.

The educational profile of the next generation of media workers is also a driver of change as labour market statistics on educational attainment show that the general standard of education is improving. It is important that young people's achievement is capitalised and that appropriate guidance on career opportunities is provided across the educational pathway. The subsequent impact in terms of skills is the ability to engage directly with the market in order to sell and monetise products and content.

In order to support growth and to plan for future labour demand, it will be of critical importance to continue to **identify the potential future drivers of change within the sector**, the resulting impact on demand for skills, and the gaps and shortages that will need to be addressed.

6.3 Scale of different drivers

Some of the drivers listed in section 6.1 will have a greater bearing on future skills development of the Creative Media and Entertainment sector than others. The following group of drivers are considered to play the most significant role in shaping the environment in which the sector operates, both now and in the future:

Drivers relating to *regulation and governance* will have a huge impact on the sector through supporting growth and ultimately improving skills levels. The scale and criticality are huge as some sub-sectors are expected to outperform the wider economy and hence the Creative Media and Entertainment sector is crucial to recovery and long term economic growth. These drivers ultimately influence the extent and impact of others:

- Continued support in government for the sector as a key driver of economic growth
- Funding from the public sector to support skill and sector development

Competition within the UK and abroad is intense for the sector so drivers relating to *economics and globalisation* must be priority drivers. It is likely that as convergence increases, competitive boundaries will become increasingly blurred:

- Competition and globalisation
- Opening up to international collaborations and a global market

Technological change is possibly the central driver within the sector. The possibilities that are available because of super fast broadband and technological developments to the Creative Media and Entertainment sector are potentially huge. The way media/content is consumed is moving with rapid pace and this means adapting skills must follow suit. Combined with this the importance of intellectual property regulation is also mounting:

- Multiplicity and convergence of screens/platforms through which content is consumed
- The pace of change and innovation – has already resulted in deficits so scale here is huge
- New models for distribution and ‘transmission’ to audiences and clients

- Intellectual property regulation.

Consumer demand, specifically in relation to technology is also a driver which has a huge impact on the sector. Globally (and across sectors) the increasing consumption of social media and online information sharing is changing business models. The rise in the use of social networking sites such as Facebook and Twitter, TV online and the development of smart phones all have a particular impact on skills:

- Consumption and sharing of information in online communities.

6.4 Differences in drivers across the four nations

Drivers for England are as specified in section 6.1 covering the whole UK. Whilst they also apply to each of the remaining three nations, **a number of drivers have been specifically highlighted as being of specific to the sector in each nation:**

Additional drivers highlighted as being of particular importance to the sector in Scotland are:

In terms of **regulation and governance**, the sector is firmly positioned as a key driver of economic growth and economic recovery. The 2011 Scottish Government economic strategy (Scottish Government 2011a) identified the Creative Industries (inc. digital) as a one of its six priority growth sectors; reinforcing the Creative Industries strategy (Scottish Government, 2011b) published earlier in 2011. The Digital Inspiration Strategy sets the ambition for Scottish companies to move up the value chain; (Scottish Digital Media Industry Advisory Group, 2010); and the existence of organisations such as Creative Scotland that invests in both creative talent and the industry itself are key developments.

TV broadcasting and production activity in Scotland 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 nine per cent (in line with its proportion of the UK population) by 2016. This will have an effect on the growth of the sector more widely and envisaged it will lead to an increasing requirement for high-end production staff in Scotland. It is also expected to have a knock-on effect amongst Scottish Independent Television Production companies through a significant increase in commissions gained. On the other hand, reduction in funding of the BBC and 'legislative creep' coupled with increasing regulation will pose challenges.

There will also be a reduction in funding for the arts infrastructure in Scotland. The draft budget for 2012/13 shows that the Culture and External Affairs portfolio will receive a 5.4% funding cut, or £13.2 million less than 2011/12. Spending on culture is expected to drop from £154.6 million in 2011/12 to £143.2 million in 2014/15. This represents a significant reduction in the amount spent by the Scottish Government on cultural funding.

Within skills supply, the 2011 Review of Post-16 Education and Vocational Training in Scotland sets out plans to integrate the post-16 education and vocational training with other parts of the education and employment system; whilst within higher education, Scottish students for the foreseeable future will not pay the tuition fee increases as experienced in the wider UK University system. The effects of which in terms of student flows within the four nations is yet to be seen.

Demographic change is additionally represented by the finding that retaining talent is an issue, with Scottish Creative Media and Entertainment employers losing indigenous creative talent south of the border into England due to greater opportunities.

Economics and globalisation is a key driver in the context that Scottish television broadcast production operates at both a UK and global level and as these markets continue to grow they will present clear opportunities for an ambitious nation to increase its share of trade (Television Broadcast and Production Working Group, 2010).

Technological change remains a central driver within the sector. In addition to the drivers identified in the UK, the Scottish Broadcast Commissions Recommendation in 2008 for the establishment of Scottish digital network. (Scottish Broadcasting Commission, 2008) and the recently announced digital infrastructure action plan (The Scottish Government, 2012) are also enabling this drive.

The **values and identities** are represented by Co-operative Scotland currently promoting co-operation between businesses (targeting the Creative Industries) to pool resources together enabling the delivery of Creative Industry products and services. Coupled with the local TV agenda, which is looking to create viable local television provision and content which aims to reinforce community identity, hold local institutions to account and encourage local political engagement (DCMS, 2011c).

Consumer demand is a driver within the sector, within Scotland specifically, the internal market for content in the medium of Gaelic is buoyant and there are 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.

Additional drivers highlighted as being of particular importance to the sector in Wales are (Creative Skillset Cymru, 2011):

In terms of **regulation and governance**, the CM&E sector is firmly positioned as a key driver of economic growth and economic recovery. The 2008 Skills That Work for Wales: A Skills and Employment Strategy and Action Plan (Welsh Government, 2008) identified the Creative Industries as one of six strategically important sectors for the Welsh economy. This was followed by the 2009 review of Creative Industries for the Welsh Assembly Government (Welsh Government, 2009) which identified a number of actions designed to boost Wales' prospects. The review proposes radical changes to the way that creative industries policy is handled and delivered by the Assembly Government and proposes a new Creative Industries Fund to replace the current Creative IP Fund. It calls for the establishment of a Digital Wales Board and a Creative Industries Board, both to be led by an experienced individual from outside Government. It also proposes a serious overhaul of business support services to the creative industries.

Reduction in funding allocated to S4C whose budget is being cut by 24 per cent will impact subsequent strategy and commissioning plans over the next four years. It is anticipated to impact specifically on the independent producers based across Wales, which will have a ripple effect through the supply chain. This should drive companies to seek opportunities outside of Wales in the form of UK wide or international projects. On the other hand, reduction in funding of the BBC and 'legislative creep' coupled with increasing regulation will pose challenges for the sector.

Arts Council Wales and other organisations that promote the arts in Wales will receive a 4.1% funding cut by 2014/15, with a requirement to cut its operating costs by 12%. This is a fairly small reduction in comparison the ACE cuts in England.

On the skills supply side, increasing tuition fees which whilst students who originate from and choose to stay in Wales to study are unlikely to be deterred. However, across the UK and globally, higher fees may result in a reduced number of graduates coming from outside of Wales to study.

Demographic change is additionally represented in Wales in that there is a concern about retaining Welsh talent, with many individuals migrating away from Wales, or away from rural locations within Wales to urban areas, after leaving higher education. The main draws tend to be large English cities such as Manchester and London, where the attraction is higher pay and better career development opportunities.

Economics and globalisation is represented in that Wales has in the past made the most of its economic connections with the UK and in certain sectors such as animation, also internationally, and may in the future take an approach which focusses more on the international market, within the EU and beyond rather than focusing on UK developments. International collaborations could become an opportunity, as locations, activities, staff and expertise are shared across international boundaries.

The **values and identities** is represented by the local TV agenda, which is looking to create viable local television provision and content which aims to reinforce community identity, hold local institutions to account and encourage local political engagement (DCMS, 2011c).

Organisations such as the Arts Council of Wales have also promoted art and culture as fundamental to the values and identities of the country (Arts Council of Wales, 2009)

Consumer demand additionally is a driver within Wales in that there is also an internal market for content in the medium of Welsh with the production of Welsh content (visual, sound and written) that is produced for Welsh speakers within Wales.

Additional drivers highlighted as being of particular importance to the sector in Northern Ireland are:

In terms of **regulation and governance**, the Northern Ireland Advisor on Employment & Skills identified for the first time the Creative Industries as an emerging sector in the Northern Irish economy. A continuation of the Creative Industries Innovation Fund was announced on 19 July 2011, with a budget of £4m over the next four years. Although the fund will continue to be administered by the Arts Council, this will now be done in collaboration with NI Screen and Digital Circle (Northern Ireland Assembly 2011).

The BBC out-of-London strategy is also key in this as Northern Ireland represents three per cent of the UK population, the BBC will aim to spend three per cent of its network production budget in NI by 2016 (up from about 0.2% in 2006). Channel 4 is also making similar noises.

On the supply side, ambitious targets have been set to increase the proportion of those people in employment with Level 2, L3 and 4-8 skills by 2020 as well as increasing the proportion of those qualifying from Northern Ireland Higher Education Institutions with graduate and post graduate level courses in STEM subjects including more graduates in creative arts and design - 'imagineers' (DELNI, 2011).

A further issue is natural 'talent drain' whereby young workers showing promise will often follow the better career prospects (and remuneration) available by moving to London. This is something of a paradox facing the sector in Northern Ireland – as in many northern English regions – is that to establish credibility and a reputation, individual employees and firms must frequently secure experience working on projects in the traditional Creative Media and Entertainment clusters of southern England, particularly London.

Youth unemployment, or those defined as 'NEET' (Not in Education, Employment or Training) is a significant issue facing the whole of the UK, and Northern Ireland is no exception. Government supported Apprenticeships are one solution to creating new employment opportunities. Creative & Cultural Skills has worked closely with employers to develop 'Creative Apprenticeship' frameworks to create new entry-level routes, giving young people access to employment and training in the creative and cultural sector.

Environmental change is less of an issue within the sector but nevertheless the design industry, alongside others, is crucial to supporting the huge occupational surge towards the low carbon and green economy.

Competition within the UK and abroad is intense for the sector **so economics and globalisation** are a key driver. Northern Ireland is also unique in the sense that it shares its border with the Republic of Ireland which has implications for the sector in terms of labour mobility and transferable skills. This has been highlighted in a tender for the Interreg 'Special European Union Programmes Body (SEUPB) - Appointment of a Lead Partner(s) with Project Partners to Deliver the Creative Industries Programme' in which Creative Skillset, University of Ulster, the Dundalk Institute of Technology, the Adam Smith Institute and the Creative Skillset Media Academy are partners. If successful the bid aims to create a senior management team from across the Creative Industries, north and south of the border.

Governments across Europe and around the world are looking for **new drivers of innovation** to enhance national and regional economic, sustainable and social development. In this broader understanding of innovation, design is increasingly being recognised as a component of user-driven innovation. In Northern Ireland, the Executive has published a draft economic strategy (2011) which identifies **'Innovation, R&D and Creativity'** as a key measure to rebalance the economy and Creative & Cultural Skills, as part of the NI Design Alliance, is working to position design as a strategic tool to help Government achieve the objectives within this strategy.

The **values and identities** is represented within Northern Ireland by the local TV agenda, which is looking to create viable local television provision and content which aims to reinforce community identity, hold local institutions to account and encourage local political engagement (DCMS, 2011c).

A further problem noted by stakeholders in Northern Ireland is the challenge of 'establishing' newcomers following entry level recruitment, since time and resources are needed to provide essential learning and development under tight budgets. The early career progression of new entrants can be slow in these circumstances, though a 'vicious circle' exists whereby required resources often remain elusive in the absence of commercial success, which itself partly depends on the calibre of the workforce and their skills. Creative Skillset, in partnership with BBC Northern Ireland and Northern Ireland Screen, is funding and administering the 'Aim High' programme. This has offered 15 recent HE and FE graduates 18-month long paid placements (minimum wage) moving between BBC Northern Ireland departments and independent production companies.

7 Future skills needs

Chapter Summary⁵⁴

- The increased need for STEM skills infused with creative talent will be key to the development of HE and FE courses and the success of the Creative Media and Entertainment sector.
- Over the next decade globalisation offers the Creative Media and Entertainment sector significant opportunities, and equally significant challenges. The growing potential markets for UK produced content offer the possibility of massive expansion. However, the increasing range of foreign competitors, often receiving governmental support through favourable policies, is of increasing concern.
- Divergence in the multiplicity of screens and variety of platforms through which people can consume content is a trend that is set to continue and increase in the decade to come. This will impact on the skillset required by individuals to produce content and also the business models needed for businesses to be successful.
- Employment in the Creative Media and Entertainment sector will grow by 277,000 by 2020. Similar to the wider UK economy, this growth will be focused around higher level occupations (manager, professionals and associate professionals).
- The Creative Media and Entertainment sector will be one of the highest growth sectors across the UK, with only construction, and hospitality, leisure and tourism experiencing higher levels of growth.
- Significant investment in higher level and technical skills is required to address skills shortages and gaps in specialist roles including VFX, camera, set crafts, complex lighting, technical and backstage roles in live music and performing arts, specialist design skills, heritage and contemporary craft skills, archaeology skills, conservation, broadcast technology and engineering, and digital skills.
- If the Creative Media and Entertainment sector is going to maximise its future opportunities national Vocational Educational Training (VET) policy urgently needs to better address the increasing higher level and technical skills required in the sector.
- An increasing array of professional skills will be needed to ensure success in the converging Creative Media and Entertainment sector.

⁵⁴ NB: Figures from official data sources (e.g. Labour Force Survey and Employer Skills Surveys) prevent analysis of key segments of the Creative Media and Entertainment sector. For further information on this see section 1.4.

- The need to create a better supply of 'job-ready' graduates into the sector will require increasing Government and sector specific solutions.

7.1 Future trends

The sector received recognition of its role in the UK economy when the first mapping of the Creative Industries was produced by the Department for Culture, Media and Sport in 1998 and 2001 (DCMS, 2001). It has now been identified as a Government priority across the UK, most prominently in the Plan for Growth published in March 2011, at a point in time when Governments across Europe are struggling for answers to the economic downturn (HM Treasury and BIS, 2011).

Over the next decade, the Creative Media and Entertainment sector will be shaped by various drivers and face significant challenges. Many of these drivers are already covered in Chapter 6 though those with particular impact over the next ten years and beyond are summarised below:

Age of austerity

Government spending cuts will impact both those organisations in receipt of public subsidy, and the potential spending power of purchasers. The financial and political constraints faced by publicly funded organisations and cultural institutions mean that occupational growth in the public sector will be challenging and significant job cuts are being seen across all sectors.

Education

Shifts in investment in both higher (BIS, 2011b) and further (BIS, 2011c) education mean that the sector's attitude to the graduate pool that feeds it will necessarily shift. The impact of new technology, already a key influence, will be felt more widely. The sector faces a challenge to develop its skills to keep up with the pace of change. There is no doubt that the sector needs to move quickly to ensure that they have the right skills to develop in the future.

The impact of new technology in education is already illustrated by the increased need for STEM skills. The Government has been keen to promote the needs for increased STEM skills in students as illustrated by the push for Computer Science to replace ICT in school's curriculum, and the rising profile of organisations like STEMNET, a BIS funded network creating opportunities to inspire young people in STEM.

Whilst STEM has gained prominence as a key driver of talent in Creative Media and Entertainment, there is also a growing understanding that coding alone isn't the solution; but rather how it is applied to imagery, manipulates it, and works with it to draw in the user. Thus, to highlight and not forget the value of art and design, several commentators have started to use the acronym STEAM where the A is for Art. For example, a film's story is only realised through multiple hardware technologies.

If the UK's creative businesses want to thrive in the digital future, you need people who understand all facets of it integrated from the very beginning...bring engineers into your company at all levels, including the top. (Schmidt, 2011).

Vocational Educational Training (VET)

If the Creative Media and Entertainment sector is going to maximise its future opportunities national VET policy urgently needs to better address the powerful singularity of the sector.

This is not a sector dominated by mature, large employers that can offer secure organisational labour markets replete with a full suite of in-work and off-site provision. The strength of the sector is its diverse provision of atypical employment characterised by a strong external labour market.

But this strength in labour supply terms – a highly qualified, highly entrepreneurial and adaptive talent pool – means the sector is leaning into a head wind in terms of VET and broader public policy. Future progress will require a wider acceptance that a sector dominated in large part by external labour markets needs a far more flexible skills system.

Globalisation

Increasingly the Creative Media and Entertainment market is a global market. Content for advertising, film, television (especially the UK's excellent record in exporting TV formats), animation, literature, performing arts, music, photo imaging and publishing are all globally integrated sectors and cultural heritage is competing on a global stage with other countries with strong cultural heritage industries.

Over the next ten years globalisation offers significant opportunities as well as potential issues for the Creative Media and Entertainment sector. In summary these are:

- Growing potential markets for UK-produced content in all formats, across all media;
- An increasing range of foreign competitors with access to the UK market;
- Increasing potential for sourcing services from the UK to overseas (off shoring);

- Increasingly, many nations are actively pursuing industrial strategies which boost their creative industries. For example, Taiwan is channelling US\$840 m of public money to creative businesses through venture capital firms. Such strategies leave the UK at risk of being left behind and our creative industries ill-equipped to fulfil their pivotal role as a driver of innovation across the knowledge economy. (Levy et al., 2011).

Divergence

The past ten years have seen an unprecedented increase in the multiplicity of screens and variety of platforms through which people can consume content; a trend that is set to continue and increase in the decade to come. Technologies such as Smart TV or Over the Top TV will change not just the way media/content is consumed but also how it is produced.

Digital technology has also had a major impact on the design sector, including shortened design timescales, faster communication, the emergence of rapid prototyping and businesses requiring fewer people carrying out more tasks. The majority of designers think skills needs are changing and the most commonly cited reason is technological advance, and the system which produces high quality design practitioners needs to adapt to keep apace.

In the music industry for example, the effects of digitisation are numerous, from convergence of product delivery onto digital platforms, to the ease of creating and recording new music, to digital publishing and marketing. 95 per cent of all UK single sales are now digital, and the future is likely to be driven by the adoption of music delivery platforms which enable on-demand access regardless of location.

Divergence is also apparent in increased audience fragmentation which in turn is driving growth in demand. According to figures from PwC by 2014 internet advertising will grow by 10.5 per cent and advertising in video games will grow by 13.7 per cent. This compares with 4.3 per cent for TV advertising and reductions of 1.2 per cent for newspapers, 11.9 per cent for print directories and 1.3 per cent for trade magazines (Stokes, 2010).

These and other drivers of change relevant to future trends are discussed in full in chapter 6.

7.2 Future occupational profile

Despite challenging economic conditions, Working Futures 2010-20 data shows that across the UK employment is expected to grow by 1,550,000 (Table 97). Closer inspection of the data suggests that this growth will be driven predominately in the higher skilled occupations of managers, professionals and associate professional/technical occupations (actual growth of 1,964,000 in employment terms). These groups accounted for 42 per cent of jobs in 2010, and may well account for 46 per cent by 2020.

There will be a decline in employment in administrative/secretarial jobs, skilled trade jobs and process plant and machine operative jobs (a decline in total of 830,000 jobs). The other occupational areas expected to grow significantly between now and 2020 are care leisure and other service (313,000) and elementary occupations (101,000).

The picture in the nations is as follows:

- Employment in England will grow by 1,383,000 by 2020 (predominately in higher skilled occupations).
- Employment in Scotland will grow by 51,000 by 2020 (predominately in higher skilled occupations).
- Employment in Wales will grow by 71,000 by 2020 (predominately in higher skilled occupations).
- Employment in Northern Ireland will grow by 44,000 by 2020 (predominately in higher skilled occupations).

Table 97: Workplace job growth by occupation within the whole economy

Employment growth	2010	2015	2020	2010	2015	2020	2010-2020
	Numbers (000s)			% shares			Net change (000s)
Managers, directors and senior officials	3,016	3,279	3,560	9.9	10.6	11.1	544
Professional occupations	5,843	6,189	6,712	19.2	20.1	21.0	869
Associate professional and technical	3,926	4,138	4,476	12.9	13.4	14.0	551
Administrative and secretarial	3,698	3,466	3,312	12.1	11.2	10.3	-387
Skilled trades occupations	3,526	3,389	3,295	11.6	11.0	10.3	-230
Caring, leisure and other service	2,719	2,801	3,032	8.9	9.1	9.5	313
Sales and customer service	2,608	2,555	2,610	8.6	8.3	8.2	2
Process, plant and machine operatives	1,950	1,829	1,737	6.4	5.9	5.4	-213
Elementary occupations	3,173	3,209	3,274	10.4	10.4	10.2	101
All occupations	30,458	30,855	32,008	100.0	100.0	100.0	1,550

UKCES, 2011, *Working Futures 2010-2020*

Table 98 shows specific employment growth in the Creative Media and Entertainment sector. As can be seen, employment within the sector will grow by 277,000 by 2020. Similar to the picture across the UK, this growth will be focused around higher level occupations (manager, professionals and associate professionals). Growth in these areas will come to 234,000 by 2020). By 2020 these jobs have the potential to make up 68 per cent of the sector (from 64 per cent in 2010). Across the UK there is no occupational area which is expected to decline.

The Creative Media and Entertainment sectors will be one of the highest growth sectors across the UK (with only construction - 309,000 net growth by 2020, and hospitality, leisure and tourism - 289,000 net growth by 2020) experiencing higher levels of growth. (UKCES, 2012)

Table 98: Workplace job growth by occupation within Creative Media and Entertainment (UK)

Employment growth	2010	2015	2020	2010	2015	2020	2010-2020
	Numbers (000s)			% shares			Net change (000s)
Managers, directors and senior officials	120	142	163	11.7	12.2	12.5	43
Professional occupations	251	299	352	24.4	25.8	27.0	102
Associate professional and technical	286	330	376	27.8	28.5	28.8	89
Administrative and secretarial	137	138	141	13.3	11.9	10.8	4
Skilled trades occupations	70	68	71	6.8	5.9	5.4	1
Caring, leisure and other service	33	38	46	3.2	3.3	3.5	12
Sales and customer service	40	43	47	3.9	3.7	3.6	7
Process, plant and machine operatives	14	14	15	1.4	1.2	1.1	0
Elementary occupations	77	87	96	7.5	7.5	7.3	18
All occupations	1,029	1,160	1,306	100.0	100.0	100.0	277

UKCES, 2011, *Working Futures 2010-2020*

7.3 Future skill needs

At an occupational level, a number of future skills requirements have been identified for the Creative Media and Entertainment sector. Illustrating these needs, Table 103 below focusses on the main occupational groups within the Creative Media and Entertainment sector, the specific skills needs and level of qualification the skills need is at. As highlighted by the evidence earlier in the report, future skills needs are predominantly at higher skilled occupational levels and require a higher level of qualification.

Table 103: Future skills needs by occupation within the creative Media and Entertainment sector.

Broad occupational group	Sector occupations	Future Skills Needs	Minimum qualification level typically required
Managers	CEO, Production Manager, Location Manager, Audience Manager, Directors and Managers of performing or heritage venues	Sales & marketing, fundraising; leadership and management; brokering; maintaining networks; financial management; business development skills;	Level 4+
Professionals	Web Developer, Programmer, Interaction Designer, Market Researcher, Audience Analyst, IPR Lawyer, Systems Analyst	Sales & marketing; technical skills; multi-skilling; skills for specific software packages; specialist design skills; business development skills;	Level 4+
Associate Professionals	Actor, Sound Engineer, Lighting Designer, Graphic Designer, Art Director, Photo Stylist, Editor, Camera Operator, Grip, Costume Designer	Creative writing; sales & marketing; technical skills; multi-skilling; skills for specific software packages; specialist design skills; business development skills;	Level 3+
Skilled trades	Rigger, Stagehand, Puppet/Model Maker, Sculptor, Scenic Artist, Chargehand Painter, Pyrotechnics, Costume Maker, Senior Dresser	Painting, sculpting; set crafts	Level 2/3

Source: *Creative Skillset and Creative & Cultural Skills*

Evidence suggests that employers within the Creative Media and Entertainment sector often find it difficult to comprehend future skills needs. Research undertaken by Creative & Cultural Skills revealed that nearly a third of businesses (32 per cent) do not anticipate future skills gaps, and 11 per cent are unable to predict what they might be. However, a fifth (21 per cent) of businesses stated that IT will become increasingly important and 12 per cent understand that marketing will become increasingly important to achieving a high level of success over the next few years. Within individual sectors fundraising is forecast to be of increasing importance in heritage organisations (19 per cent) and creative writers are expected to be important to success in the literary arts sub sector (23 per cent) – (Creative & Cultural Skills, 2009).

In similar research undertaken by Creative Skillset over a third of Creative Media employers identified sales and marketing (34 per cent) as the most likely skills gap over the next three to five years. This was followed by skills using specific software packages (29 per cent), technical skills (25 per cent), multi-skilling (24 per cent), and leadership and management (22 per cent) – (Creative Skillset, 2010a).

The implications of the growth projections from Working Futures 2010-20 are that significant investment in higher level and technical skills is vital. In particular, for technical specialisms:

- Associate professional and technical skills: skills shortages and gaps exist in specialist roles including VFX, camera, set crafts, complex lighting and technical and backstage roles in live music and performing arts, specialist design skills, heritage and contemporary craft skills, archaeology skills, conservation, broadcast technology and engineering, and digital skills. Currently neither HE nor CPD is fully equipping individuals with the technical expertise needed by employers;
- Creative skills including story-writing, musical composition and performance, painting, sculpting and engaging with design concepts.

The key to resolving these skills shortages is to ensure that the right vocational qualifications are in place at the right level, particularly with regards to associate professional and technical skills. Effective promotion of such vocational qualifications is also a critical factor here, so that employers and individuals can understand more clearly how they may be of benefit to them.

The current economic environment means that the need for these skills is increasingly urgent as the sector has to cope with change. Organisations, sole traders and freelancers across the Creative Media and Entertainment sector will also require the following set of professional skills:

- There is significant and increasing demand for corporate managers able to cope with market change and increasing competition who can adopt high performance working practices;
- The increasingly global scale of opportunities and competition and the increasing breadth and complexity of the sector will continue to invoke the need for management skills in brokering and maintaining networks and alliances across both industrial and geographical boundaries;

- The multi-platform environment in which the sector now operates has created new demands at management level, for the project management and hybrid skills combining leadership with creativity and understanding of technology; and at professional level, to enable creation of content for distribution across multiple channels. Protection of intellectual property is also a major issue;
- 'T' shaped skills are an increasing priority for many sectors, so that individuals can combine the expertise they possess in their own area with some degree of skilling in other areas, and apply their specialist expertise across those areas in teams;
- Financial management skills;
- Income generation and business development skills;
- Marketing and communication skills;
- Customer service skills.

More needs to be done to create a better supply of 'job-ready' graduates into the Creative Media and Entertainment sector as a whole. A better fit between employers and FE and HE providers needs to be developed with more relevant and up-to-date courses. Within HE the need for a better fit with employers is the subject of a review being undertaken by Professor Sir Tim Wilson on behalf of BIS to ascertain *'how we make the UK the best place in the world for university-industry collaboration'* and encourage *'universities to look again at how they work with business across their teaching and research activities, to promote better teaching, employer sponsorship, innovation and enterprise'* (BIS, 2011b). In addition, Creative Skillset's Media and Film Academy Network and Accredited courses and The National Skills Academy (NSA) for Creative and Cultural (as a key delivery partner for their Apprenticeships programme) are two examples of sector specific solutions to the need for a better fit between employers and FE and HE providers.

Though many of the SMEs in the sector continue to rely on ad hoc training and work based learning on the job there is a growing recognition that more support is required. As a consequence employers are becoming much keener to promote greater uptake of Sector Skills Council backed courses and accreditation services which identify provision that best meet sector needs, although this does depend on the sub-sector in question. However, developing a more honed supply chain into the Creative Media and Entertainment sector will require additional resources at a time when the public purse is more constrained than ever. This will require an even higher degree of self-reliance across the sector than previously.

8 Priority areas for action

Chapter Summary⁵⁵

- Derived from skills deficits which are of critical importance to the economy and require immediate action, Red Priority Skill Areas for Immediate Action identified are:
- There is significant and increasing demand for corporate and event managers able to cope with market change and increasing competition who can adopt high performance working practices.
- The increasingly global scale of opportunities and competition and the increasing breadth and complexity of the sector will continue to invoke the need for management skills in brokering and maintaining networks and alliances across both industrial and geographical boundaries.
- The multi-platform environment in which the sector now operates has created new demands at management level, for the project management and hybrid skills combining leadership with creativity and understanding of technology; and at professional level, to enable creation of content for distribution across multiple channels. Protection of intellectual property is also a major issue.
- The fusion of innovation and creativity with technical skills has been highlighted as a priority for many years: in other words, harnessing the knowledge transfer more effectively between STEM subjects and creative media.
- 'T' shaped skills are an increasing priority for many sectors, so that individuals can combine the expertise they possess in their own area with some degree of skilling in other areas, and apply their specialist expertise across those areas in teams.
- Skills shortages and gaps exist in some associate professional and technical roles including camera, set crafts, complex lighting and technical and backstage roles in live music and performing arts, specialist design skills, heritage and contemporary craft skills, archaeology skills, conservation, graphic design and digital skills. Currently neither HE nor CPD is fully equipping individuals with the technical expertise needed by employers.
- Pink Priority Skill Areas indicating skills deficits which are again of critical importance but which may be smaller in scale include:

⁵⁵ NB: Figures from official data sources (e.g. Labour Force Survey and Employer Skills Surveys) prevent analysis of key segments of the Creative Media and Entertainment sector. For further information on this see section 1.4

- Sales and marketing skills are a priority in a number of sectors, including: radio, publishing and photo imaging.
- Fundraising and commercialisation are seen as major issues in cultural areas such as heritage. As public funding is diminished, organisations will need the skills to harness new business development and philanthropic investment.
- A number of highly specialised skill areas within visual effects have long been identified as in short supply at a global level. VFX companies have traditionally recruited from all over the world to meet the demand for these roles and VFX appears on the Home Office skills shortage occupation list.
- Broadcast technology and engineering continues to be an area of skills shortage due to a combination of lack of new recruits; deficiencies in higher and further education; ageing of the current workforce; lack of framework for continuing professional development and the pace of technological change.
- Creative skills are key to the future success of the sector. They include areas such as story or script writing, musical composition and performance, theatrical performance and painting.

8.1 Introduction

The earlier sections of this report have identified current and likely future trends in demand for skills and employment in the Creative Media and Entertainment sector over the coming five to ten years, using all relevant national data sources, and analysis of intelligence from Creative Skillset's and Creative & Cultural Skills' own research and other sector-specific sources. It has thus sought to provide greater insight into, and foresight of the sector's existing and likely future skills needs.

This final chapter pulls together from the extensive array of intelligence presented earlier in the document, some core strategic areas for action. Specifically, it highlights occupations and skill areas within the sector in which attention most urgently needs to be focused if the sector is to reach its potential in the coming years.

The intention is not to prescribe specific courses of action, but to summarise intelligence and foresight about strategic skill needs in the sector to stakeholders in the skills and employment system. The aim is to assist all stakeholders in making their education, training and development decisions, enabling a better response to current needs. It should help inform and influence all stakeholders: individuals and their advisors; providers (schools, colleges, universities and training providers); funders; employers; government and public agencies, so that they can take appropriate action and achieve a better balance between supply and demand.

8.2 Priority areas for action

The purpose of this section is to highlight which skill areas emerge as strategic priorities for action, from the analysis carried out in previous sections. This is essentially where there are:

- current and/or anticipated future skills needs, which are significant in scale or volume already in the labour market, or are expected to be a significant requirement in terms of future needs;
- significant current and/or emerging skills needs which are already making (or likely to make in the future) a significant contribution to economic performance (although they may be more moderate in scale);
- concerns over whether the skills needed will be adequately met and hence there is a skills deficit (or there may be questions over future supply if future demand is stimulated).

The need for **short, medium and long-term action is highlighted**, and the likely implications of inaction are predicted. Appropriate action may be targeted at either supply or demand. Thus while it may involve action to re-skill or up-skill people, it could equally involve action on the demand side to ensure better job-matching or deployment and utilisation of skills.

The approach used is based on that employed by the UK Commission for Employment and Skills in its 2010 National Strategic Skills Audit for England. This in turn was drawn heavily from the risk-based approach adopted in Australia (Skills Australia, 2008) which has already been used and effectively deployed in a policy context, to develop a national workforce development strategy. The approach enables identification of key occupations and skill areas in sectors where there are most likely to be **important strategic skills** needs, which are at risk of not being effectively met. This risk based approach uses the following criteria:

- **Degree of certainty** – this essentially considers the likelihood of the drivers of the skills demand materialising, and, the risk of supply failure, with assessments ranging from ‘unknown certainty’ to a perceived definite outcome. It also includes consideration of the significance of the skill deficit under multiple scenarios.
- **Magnitude** – this considers the scale of action required based on the magnitude of skills needs. This is broadly based on the numbers of jobs that need filling. Future assessments of magnitude capture total employment demand and incorporate both replacement demand as well as new jobs. The rating varies from small to large, with the highest scale covering demand for at least 100,000 workers, the medium scale for 50,000 to 100,000 workers and the small scale applying where demand is for less than 50,000 workers.
- **Lead time** – this seeks to assess the length of time needed to rectify the skills deficit. In doing so, it also considers whether there is an absence of alternative preferred strategies to overcome the deficit. It deploys categories ranging from short to long term, with: the long lead time being more than five years, three-five years capturing the medium lead time, and less than three years applying to the short lead time. This measure includes both the learning time required for individuals and the set up time for any new training or educational provision.
- **Criticality** – this seeks to assess the potential risk to economic growth and development according to:
 - the priority sectors analysis of chapter five to identify where the opportunity costs of skills deficits could be high to the economy;

- the analysis in chapter six to identify where the consequences of skills deficits could be high within sectors, even if the numbers of jobs involved are small.

Thus, some of the likely deficits are about **capacity** – i.e. insufficient numbers of people with the necessary skills and knowledge, and others are about **capability** – the numbers of people exist, but their skill sets need to change in order to meet changing needs.

Depending on how these factors combine, each skills deficit is then given **an importance rating and colour coded**, indicating how much of a priority it is for action. The principal weighting given to these factors is the potential cost of a skills deficit to the overall economy and therefore the level of need for immediate intervention. Where this is most severe it automatically results in a top priority rating, which is signified with the colour red. Specifically, the ratings used are:

- **Red**, indicating skills deficits which are of critical importance to the economy and require immediate action, either because there are current skills needs already not being met and/or because lead times are such that early action is required to fully optimise economic growth potential and avoid deficits in future.
- **Pink**, indicating skills deficits which are again of critical importance to the economy or a particular part of the economy or sector, in terms of expansion, survival and/or optimising returns, but which may be smaller in scale or have a shorter lead time than for those rated as red.
- **Amber**, indicating skills deficits which are important to the economy and/or a distinct sector rather than critical (although the degree of certainty may be less clear and hence the true impact unknown, where the skills needs are connected to a developing or emerging sector in the economy). Furthermore, skills deficits are either moderate in scale and/or can be filled in a medium to short time frame.

Table 104 presents a summary of the results of the priorities analysis using the above framework. Within each level of risk, priorities are set out separately for management and professional roles. This distinction is intended to be functional rather than hierarchical, so that ‘management’ includes all roles involved in management and leadership, including generic or supporting functions, while ‘professional’ includes everyone using specialist skills to develop, produce or deliver content, at whatever level.

Table 104: Matrix of skills priorities

Skills/occupational Priority	Sub sector(s) affected	Degree of certainty – definite, likely, possible, unknown	Magnitude – large, medium, small (current and future)	Lead time – short/medium/long	Criticality to a) the industry b) wider economy through GVA and/or job volume
Red – High Priority Skill Areas for Immediate Action					
Management Roles					
Significant and increasing requirement for corporate and cultural venue operations managers; also management and leadership skills among new and micro-businesses	All	Definite Significant current as well as future demand, and current evidence of deficits. Future trends will accentuate demand, e.g. organisations will need to be increasingly agile to cope with market change, increasing competition, and adopt HPW – change management leadership key among core managers.	Large	Medium – mix of on the job and off the job.	Critical to both as: a) core skills needed in the industry b) some sectors of the industry expected to outperform the wider economy and the CM&E sector is crucial to recovery and long term economic growth
Management skills in forming, brokering and maintaining networks and alliances due to global scale of opportunities and competition, increasing complexity and breadth of industry and need for collaboration. Understanding and international competition	All	Definite Already a major issue in most sectors for many years, reflected e.g. in changes in media ownership and collaboration	Medium	Medium	Critical to both as: a) core skills needed in the industry b) some sectors of the industry expected to outperform the wider economy and the CM&E sector is crucial to recovery and long term economic growth

Skills/occupational Priority	Sub sector(s) affected	Degree of certainty – definite, likely, possible, unknown	Magnitude – large, medium, small (current and future)	Lead time – short/medium/long	Criticality to a) the industry b) wider economy through GVA and/or job volume
Management of multi-platform content creation, especially project management for multi-platform development; the hybrid skills combining leadership with innovation, creativity and understanding of technology.		Definite Already a major issue facing most media sectors as a result of convergence of technologies and hitherto discrete parts of the sector.	Medium	Medium	Critical to both as: a) core skills needed in the industry b) some sectors of the industry expected to outperform the wider economy and the CM&E sector is crucial to recovery and long term economic growth
Management skills around protection of intellectual property	All	Definite Already a major issue for most sectors of the industry, with a massive impact on some sectors. Crucial to global competitiveness and even survival of the UK industry.	Medium	Short	Critical to both as: a) IP protection essential for commercial exploitation and taking advantage of emerging markets within the sector b) Critical for protecting UK's commercial assets across all sectors and CM&E crucial for wider economic recovery

Skills/occupational Priority	Sub sector(s) affected	Degree of certainty – definite, likely, possible, unknown	Magnitude – large, medium, small (current and future)	Lead time – short/medium/long	Criticality to a) the industry b) wider economy through GVA and/or job volume
Professional Roles					
Multi-platform skills: convergence requires an understanding of how to create, market and distribute content across a range of channels and platforms, and the ability to exploit technological advances. This includes cross-over of content from live platforms to interactive and cross-platform outputs	All	Definite Pace of convergence has already resulted in deficits.	Large	Medium	Critical to both as: a) core skills needed in the industry b) some sectors of the industry expected to outperform the wider economy and the CM&E sector is crucial to recovery and long term economic growth

Skills/occupational Priority	Sub sector(s) affected	Degree of certainty – definite, likely, possible, unknown	Magnitude – large, medium, small (current and future)	Lead time – short/medium/long	Criticality to a) the industry b) wider economy through GVA and/or job volume
Fusion of innovation and creativity with technical skills – harnessing the knowledge transfer more effectively between STEM subjects and creative media, as well as the heritage sector and core ‘making’ skills linked to craft, design and visual arts	All	Definite This has already been highlighted for many years within most areas of the CM&E sector. Shortages of e.g. Creative Programmers and Technical Artists and lack of computer programming skills among creatives	Large	Long Interventions already in place with long lead times, e.g. the Next Gen skills campaign launched by the UKIE, and relicensing criteria for Creative Skillset Media Academies. The Craft Council has also recently highlighted examples of traditional making techniques being used in collaboration with scientific and medical innovations	Critical to both as: a) fusion of creative intervention and technological intervention crucial to future success of the CM&E sector b) some sectors of the industry expected to outperform the wider economy and the CM&E sector is crucial to recovery and long term economic growth
‘T’ shaped skills: combining expertise in own area with some degree of skilling in other areas, and the ability to apply own skills across those areas in teams.	All, especially digital media	Definite Major problem already for many sectors has been the demand for individuals with specialist skill sets with limited understanding of wider business and other skill areas, and how to work effectively across teams and functions	Large	Short-Medium	Critical to both as: a) fusion of creative intervention and technological intervention crucial to future success of the CM&E sector b) Many people involved in interdisciplinary working will be involved outside the CM&E sector but will provide a vital creative function in another sector. Hence this skill is crucial to innovation in the wider economy

Skills/occupational Priority	Sub sector(s) affected	Degree of certainty – definite, likely, possible, unknown	Magnitude – large, medium, small (current and future)	Lead time – short/medium/long	Criticality to a) the industry b) wider economy through GVA and/or job volume
Skills shortages and gaps exist in a range of technical and vocational skills ('associate professional and technical' level), including for example, complex lighting, technical theatre and backstage occupations, community arts sectors and live events management	All	Definite A number of areas have been identified in which neither HE nor CPD is fully equipping individuals with the technical expertise needed by employers. Areas already affected include lighting, technical and backstage roles, design skills, heritage and contemporary craft skills, archaeology skills, conservation, and digital skills	Large	Medium-long term need for employers to be able to influence HE and CPD provision, and more appropriate vocational education for specific technical skills	a) A more strategic approach to HE and CPD required for the future competitiveness of the sector. and more appropriate vocational education for specific technical skills
Pink – High Priority Skills Needs Which are of Importance Rather than Critical to the Economy and/or Distinct Sectors but where Deficits are Smaller in Scale and Require a Shorter Lead Time to Rectify than those Rated Red					
Management Roles					
Sales and Marketing	Potentially all, but has been specifically highlighted in radio, publishing and photo imaging	Definite	Small	Short-medium	a) Critical to competitiveness of commercial radio and publishing

Skills/occupational Priority	Sub sector(s) affected	Degree of certainty – definite, likely, possible, unknown	Magnitude – large, medium, small (current and future)	Lead time – short/medium/long	Criticality to a) the industry b) wider economy through GVA and/or job volume
Fundraising and commercialisation. As public funding is diminished, organisations need the skills to harness new business development and philanthropic investment	All creative media and entertainment especially those most closely linked to or funded by public sector	Definite	Medium	Short-medium	a) Crucial to the survival of some areas such as parts of the heritage sector which currently rely heavily on public funding
Professional Roles					
Visual Effects is dependent on highly specialised technical and artistic skills which are in short supply globally.	Film, TV and Animation	Definite VFX companies have traditionally recruited from all over the world to meet the demand for specialist roles and VFX appears on the Home Office skills shortage occupation list	Small	Long	a) This occupation is crucial to the global competitiveness of the UK's film industry and its potential for inward investment.
Broadcast technology and engineering	TV and radio	Definite Continuing to be an area of skills shortage due to a combination of lack of new recruits, deficiencies in HE and FE, ageing profile of incumbent workforce, lack of framework for CPD and pace of technological change	Small	Long Long term shortage in supply of engineering graduates	a) Critical to TV sector in particular as reliant on the occupation for broadcasting and distribution of programmes.

Skills/occupational Priority	Sub sector(s) affected	Degree of certainty – definite, likely, possible, unknown	Magnitude – large, medium, small (current and future)	Lead time – short/medium/long	Criticality to a) the industry b) wider economy through GVA and/or job volume
Creative skills – the basis for content creation on which other layers of the sector are founded, including: story or script writing, musical composition and performance, theatrical performance, painting, etc	All	Definite	Large	Long	a) The UK has built a world class reputation based on these core creative skills which are intrinsic to a world class CM&E sector b) Major secondary economic benefit of these sectors to the rest of the economy
Amber – Medium Priority Skills Needs of Moderate Scale and/or Time Frame for Action where the Degree of Certainty of Impact May be Less Critical					
Management Roles					
Foreign language skills: helpful in exploiting opportunities in increasingly global marketplace	All	Likely	Small	Short-Medium	a) Potentially critical in exploiting markets where English not commonly spoken as a second language, depending on the scale of such opportunities (e.g. China)
'Other' business skills	All – nearly all sectors have reported skills gaps in areas such as HR, financial and project management	Definite (current)	Small	Medium	a) Particularly salient issue in negotiating current economic climate given need for efficiency and effective organisational development

Skills/occupational Priority	Sub sector(s) affected	Degree of certainty – definite, likely, possible, unknown	Magnitude – large, medium, small (current and future)	Lead time – short/medium/long	Criticality to a) the industry b) wider economy through GVA and/or job volume
Professional Roles					
Archiving of digital content	All	Likely – attracting increasing attention as a future challenge	Small	Long	a) Potentially important part of process of content management to enable repurposing, etc

The table demonstrates how key skills priorities identified mainly fall at management, professional and associate professional level. This illustrates both the large composition of these occupations within the Creative Media and Entertainment sector, and the global and technological drivers that are currently and in the future will impact on the how employers will work. The key high priority skills areas for immediate action at management level are focussed in management and leadership, multi-platform content creation, networking and intellectual property (IP). The corresponding high priority skills areas for professional occupations are focussed in multi-platform content creation, the fusion of creative and technical skills, T-shaped skills, and specific vocational areas such as complex lighting and community arts. As such it provides an authoritative summary to this report on the main sectoral skills requirements.

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Glossary

ABI	Annual Business Inquiry (now Annual Business Survey)
APS	Annual Population Survey
ASHE	Annual Survey of Hours and Earnings
BAME	Black, Asian and Minority Ethnic
BIS	Department for Business, Innovation and Skills
BRES	Business Register and Employment Survey
CIC SSG	Creative Industries Council Creative Skillset Skills Group
CEDEFOP	European Centre for the Development of Vocational Training
DCMS	Department for Culture Media and Sport
EU	European Union
GVA	Gross Value Added
HPW	High Performance Working
HTFV	Hard To Fill Vacancies
ICT	Information and Communication Technologies
IDBR	Inter Departmental Business Register
IER	Institute for Employment Research (University of Warwick)
IPA	Institute of Practitioners in Advertising
LFS	Labour Force Survey
LSIS	Learning and Skills Improvement Service
LARIMS	Libraries, Archives, Records and Information Management Services
NESTA	National Endowment for Science Technology and the Arts
N/SVQ	National/Scottish Vocational Qualifications
OECD	Organisation for Economic Co-operation and Development
ONS	Office for National Statistics
SIC	Standard Industrial Classification
SMEs	Small and Medium-sized Enterprises

SOC	Standard Occupational Classification
SSC	Sector Skills Council
SSV	Skill Shortage Vacancy
STEM	Science, Technology, Engineering and Mathematics
STEMNET	BIS funded network creating opportunities to inspire young people in STEM
T-skills	Highly specialised in one core field, but with broad skills and knowledge to utilise specialisms across teams and platforms
UN COMTRADE	United Nations Commodity Trade
UNCTAD	United Nations Conference on Trade and Development
UKCES	UK Commission for Employment and Skills
UKESS	United Kingdom Employer Skills Survey
VFX	Visual Effects

Appendix 1: Technical appendix

The provision of core data

To ensure consistency and comparability across all 15 SSA reports, data from core labour market information sources was centrally collected, processed and formatted. It was then distributed by the UK Commission to Sector Skills Councils for inclusion within the reports.

Core data was centrally produced from the following sources:

- The Labour Force Survey
- The UK Commission's Employer Skills Survey 2011
- Working Futures 2010-2020
- Regional Accounts (information on Gross Value Added)
- Mid Year Population Estimates
- European Continuing Vocational Training Survey
- Business Demography Statistics

Data from the Labour Force Survey, regional accounts and mid-year population estimates was collated, processed and formatted by Cambridge Econometrics and the Institute for Employment Research (IER), Warwick.

Data from the UK Commission's Employer Skills Survey 2011 was collated and processed by IFF Research and formatted by the UK Commission.

Data from Working Futures was collated, processed and formatted by IER.

Data from the European Continuing Vocational Training Survey and Business Demography Statistics was collated, processed and formatted by the UK Commission.

All data was quality assured by contractors, the UK Commission and by Sector Skills Councils.

It has been necessary to suppress some data within the reports to adhere to official guidelines regarding data quality. The details of suppression strategies applied to data from specific sources are described in more detail below. Data for Scotland, Wales and Northern Ireland for the three smallest SSA sectors is most likely to be suppressed. These are:

- Agriculture, forestry and fishing
- Energy production and utilities
- Information and communication technologies).

8.3 Methodological information for core labour market information sources

Method used to derive estimates of gross value added (GVA) per employee job by SSA sector and nation

No official estimates are currently available for the level of productivity by sector and UK nation. The figures presented in this report have therefore been estimated by the UK Commission using the following process.

Levels of workplace gross value added at current basic prices by SIC 2007 Section were derived from the official estimates published by the Office for National Statistics as part of its Regional Accounts series. Levels of employee jobs were taken from the Business Register and Employment Survey for 2009.

The sectoral “footprint” definitions used as the basis for the SSA reports are not coterminous with SIC Sections, however, and in some cases draw on 2-digit SIC divisions. At present the official GVA estimates for nations and regions are only available at a SIC section level.

To overcome this an approach was adopted which has been developed by Welsh Government to derive gross value added estimates for its priority sectors. This approach was applied to the UK and all four nations. Approximate estimates of GVA at 2-digit level are available for much of the economy from the Annual Business Survey (ABS). These were used to allocate GVA at the 2-digit level with the results being constrained to the official GVA totals by SIC section taken from the Regional Accounts. For those areas of the economy not covered by the ABS, shares of employment at the 2-digit level were used instead, taken from the Annual Population Survey.

Labour Force Survey

About the survey

One of the key data sources used within this report is the Office for National Statistics’ (ONS) Labour Force Survey (LFS). The LFS is a survey of households living at private addresses (plus in NHS accommodation and student halls of residence) in the UK.

The survey is conducted on a quarterly basis. The sample is made up of around 41,000 responding (or imputed) households in Great Britain every quarter, and around 1,600 households in Northern Ireland. The LFS uses a rotational sampling design which means that, once selected, a household⁵⁶ is kept in the sample for a total of five consecutive quarters.

Interviewers can take answers to questions by proxy if a respondent is unavailable. This is usually from another related adult who is a member of the same household. About a third of LFS responses are collected by proxy. Information on individuals aged 16 – 19 most likely to be obtained by proxy.

Full user guidance can be accessed here: <http://www.ons.gov.uk/ons/guide-method/user-guidance/labour-market-statistics/index.html>

Preparation of LFS data for this report

The UK Commission provided report authors with a core set of tables based on LFS data for mandatory inclusion within Sector Skills Assessment reports. The data within these tables was prepared by two contractors: Cambridge Econometrics (CE) and Warwick Institute for Employer Research (IER).

Data was prepared in three stages:

1. The original survey data was gathered and coded by IER to the categories and classifications required for the SSA tables. This was then sent to CE
2. CE used the data prepared by IER and derived the indicators and aggregated the data to the dimensions required for the tables
3. The UK Commission checked tables and distributed to report authors

Annual data presented within this report is based on an average of four consecutive quarters of data. Data prior to 2009 is based on SIC2003 and data for 2009 and 2010 is based on SIC2007 codes.

Reporting of LFS data

In line with ONS convention, annual LFS data presented within this report has been suppressed if individual cell sizes fall below 6,000. This is because cell sizes of fewer than 6,000 are deemed to be low quality estimates.

⁵⁶ Note, it is the address that is selected and not necessarily the particular people who live there.

Analysis of employment uses all four categories of employments status within the LFS: employee, self-employed, government scheme & unpaid family worker.

Please note, some tables present a total for *All sectors* while others present a total for *Whole economy*. The values for these totals are different because the *Whole economy* total includes the 'Not within scope' category (i.e. sectors that don't fall within an SSA sector), whereas *All sectors* is the total for just the 15 SSA sectors.

UK Commission's Employer Skills Survey 2011

The UK Commission's Employer Skills Survey 2011 (UK Commission's ESS 11) was the first large-scale economy-wide employer skills survey to be conducted across the whole of the UK. The survey was managed by the UK Commission for Employment and Skills and was conducted by three contractors: IFF Research, BMG Research and Ipsos Mori (Davies et al, 2012). The project steering group included representatives from all four nation governments, the Alliance of Sector Skills Councils, the Department for Work and Pensions and the Skills Funding Agency.

Fieldwork was carried out from March to July 2011. Two waves of interviews were conducted. The main survey involved telephone interviews with approximately 87,600 employers and a follow-up survey focusing on investment in training was undertaken with over 11,000 respondents. The data presented within this report draws only on information gathered from the main survey.

The table below provides information on the number of employers interviewed by sector and nation for the main survey.

SSA sector	England	Scotland	Wales	NI	UK
Agriculture, forestry and fishing	1,270	99	133	45	1,547
Energy production and utilities	1,306	106	133	69	1,614
Manufacturing	6,774	182	470	350	7,776
Construction	7,538	300	660	463	8,961
Wholesale and retail trade	13,919	333	1,129	769	16,150
Transportation and storage	4,078	152	300	205	4,735
Accommodation, food and tourism activities	9,630	324	909	455	11,318
Information and communication	2,262	56	111	81	2,510
Creative media and entertainment	3,301	99	227	135	3,762
Financial, insurance & other professional services	4,525	146	391	281	5,343
Real estate and facilities management	3,113	85	133	93	3,424
Government	2,078	163	188	176	2,605
Education	4,597	164	391	287	5,439
Health	2,912	107	242	137	3,398
Care	4,028	101	338	296	4,763
Not within scope	3,722	86	257	162	4,227
Total	75,053	2,503	6,012	4,004	87,572

UK Commission's ESS 11 is a quota survey. Quotas were set on a size by sector within nation / English region basis. In Northern Ireland and Wales, where more interviews were carried out than the required minimum to get national representation, they were predominately distributed in proportion to the population.

In order to include the maximum number of questions without extending the overall length of the interview, the sample was randomly split in half for some sections, and one set of employers were asked one module of questions, and the other half of the sample different questions.

The survey is a local unit (establishment) survey. This means that for large multi-site organisations several branches/ locations may have been interviewed. The establishment level sampling reflects that the survey asks employers about issues that need to be answered by people with day-to-day contact with employees rather than head office.

Respondents are those who have the best overview of HR and training within the establishment. This will tend to be HR or training managers in large establishments and owner/managers or senior managers within small establishments.

The valid population of establishments being used in UK Commission's ESS 11 is all establishments with the exception of sole traders (this means that establishments with one employee and no working proprietors (for e.g. flower stall at a station, where there is one person working but they don't own it themselves) are included). In addition, establishments with multiple working proprietors but no employees are also included.

Sampling error for the survey results overall and for different sub-groups by which analysis is presented in the report is shown in the table below. Sectoral figures are presented for the 14 SIC 2007 sections which were used for the survey sampling approach.

Figures have been based on a survey result of 50 per cent (the 'worst' case in terms of statistical reliability), and have used a 95 per cent confidence level. Where the table indicates that a survey result based on all respondents has a sampling error of +/- 0.32 per cent, this should be interpreted as follows: 'for a question asked of all respondents where the survey result is 50 per cent, we are 95 per cent confident that the true figure lies within the range 49.68 per cent to 50.32 per cent'.

As a note, the calculation of sampling error has taken into account the finite population correction factor to account for cases where we are measuring a significant portion of the population universe (i.e. even if two sample sizes are the same, the sampling error will be lower if in one case a far higher proportion of the population was covered).

These confidence intervals are based on the assumption of a normal distribution of responses.

Sampling error (at the confidence 95 per cent level) associated with findings of 50 per cent

	Population	Number of interviews	(Maximum) Sampling Error
Overall	2,299,921	87,572	+/-0.32
By country			
England	1,960,298	75,053	+/-0.35
Northern Ireland	65,559	4,004	+/-1.5
Scotland	175,114	2,503	+/-1.94
Wales	98,950	6,012	+/-1.22
By size of establishment			
1-4	1,466,397	18,955	+/-0.99
5-24	648,446	47,770	+/-0.61
25-99	147,319	15,951	+/-1.03
100-249	25,945	3,270	+/-2.27
250+	11,814	1,626	+/-3.12
By sector			
Agriculture	98,458	939	+/-3.18
Mining & Quarrying	2,222	188	+/-6.84
Manufacturing	128,255	7,704	+/-1.08
Electricity, Gas and Water	10,583	1,426	+/-3.35
Construction	241,429	6,654	+/-1.18
Wholesale and Retail	441,365	15,340	+/-0.78
Hotels & Restaurants	167,215	8,471	+/-1.04
Transport and Communications	210,801	7,885	+/-1.08
Financial Services	52,381	1,881	+/-2.22
Business Services	551,612	14,488	+/-0.80
Public Administration	26,058	1,617	+/-2.36
Education	65,499	5,439	+/-1.27
Health and Social Work	140,269	8,161	+/-1.05
Community, Social and Personal Services	163,774	7,379	+/-1.11

Looking specifically at sampling error for SSA sectors at national level, Agriculture in Scotland provides an illustrative example. 99 interviews were completed for this sub-group. Applying the assumptions outlined above, this gives a maximum sampling error of around +/- 10 percentage points. This demonstrates the indicative nature of the detailed survey estimates for smaller sectors.

Within the report, data based on unweighted bases of less than 25 have therefore been suppressed for quality reasons. In addition, data based on unweighted bases of between 25 and 50 have been marked as indicative. More stringent thresholds have been applied in Scotland because of the lower total number of interviews that were conducted. Estimates based on unweighted bases of fewer than 50 have been suppressed, whilst estimates based on bases of 50-99 are marked as indicative in the relevant tables.

Finally, occupations within the survey are defined by 2010 Standard Occupational Classification codes and sectors are defined by 2007 Standard Industrial Classification codes.

Please visit the UK Commission's Employer Surveys website for further information including the full survey report and questionnaire. <https://ness.ukces.org.uk/default.aspx>

Working Futures

Working Futures 2010-2020 is the latest in a series of detailed projections of UK employment, productivity, labour supply and skills. The projections have been prepared by the Institute for Employment Research (IER) and Cambridge Econometrics (CE) on behalf of the UK Commission for Employment and Skills (UKCES).

The projections are calculated from a number of different data sources, including the Annual Business Inquiry, the Business Register and Employment Survey, and the Labour Force Survey. The results provide a picture of employment prospects up to 2020 by industry, occupation, qualification level, gender and employment status for the UK as a whole, the four nations, and English regions.

As with all projections and forecasts, the results presented in Working Futures should be regarded as indicative of likely trends and orders of magnitude given a continuation of past patterns of behaviour and performance, rather than precise forecasts of the future. At a time of great uncertainty about the short to medium term prospects for the economy, it is important to stress the value of Working Futures in aiding understanding of likely prospects for employment in the longer term (i.e. in 2020). Readers should therefore focus on the relative position of sectors, and occupations in 2020 and treat the projected values as broad indicators of scale rather than exact predictions.

Further methodological details can be found on the UK Commission's website - <http://www.ukces.org.uk/publications/working-futures-technical-report>

Methodological information for Sector Skills Council labour market information sources

Creative and Cultural Industries Impact and Footprint 10/11

The creative industries are not adequately represented through any consistent method of defining and operationalising activity in the industry in a statistical process.

The fundamental difficulty associated with deriving robust, replicable, sustainable and comparable statistics for the creative industries is that in order to do so, one must use the classic SIC and SOC classification systems. SIC and SOC systems are widely used and relied upon for defining sectors, industries, workforces and occupational groups, but they have significant shortcomings, particularly when associated with industries that are defined more broadly by the activity that occurs within organisations rather than a pure assessment of output.

TBR, an independent research organisation who have worked with Creative & Cultural Skills to develop data for the creative and cultural industry, has produced a methodology to navigate these issues. The methodology involves developing firm and employment coefficients, examples of which are shown below.

The following table displays each SIC used to build the music and performing arts sector as examples. A comparison data of this approach to the use of official datasets can be seen in appendix 4.

The following table displays each SIC used to build the music and performing arts sector. So for example, 57.10% of all those employed in businesses within SIC code 59.20 (Sound Recording and Music Publishing Activities) will employ skills and activity explicitly associated with output related to this area.

Table 105: Firm & Employment coefficients for each Non-Craft 4-digit SIC

Sector	Segment	Sub-Segment	SIC	Firm Coefficient	Emp Coefficient
Music	Composition of Musical Works & Music Publishing	Publishing of Sound Recordings	5920: Sound recording and music publishing activities	33.90%	57.10%
	Live Performance	Venues	7990: Other reservation service and related activities	3.10%	2.10%
			9001: Performing arts	0.50%	1.50%
			9004: Operation of arts facilities	77.60%	73.10%
	Musical Education	Musical Education	8552: Cultural education	15.70%	27.30%
	Production, Retail & Distribution of Musical Instruments / Audio Equipment	Musical Instrument Manufacture	3220: Manufacture of musical instruments	100.00%	100.00%
			9529: Repair of other personal and household goods	86.30%	79.30%
		Retail Audio Equipment	4743: Retail sale of audio and video equipment in specialised stores	83.00%	77.00%
			4759: Retail sale of furniture, lighting equipment and other household articles in specialised stores	0.00%	0.10%
		Retail Musical Instruments	4759: Retail sale of furniture, lighting equipment and other household articles in specialised stores	6.90%	5.10%
		TV radio HiFi etc eqt manufacture	2640: Manufacture of consumer electronics	93.00%	89.40%
		Wholesale Audio Equipment	4643: Wholesale of electrical household appliances	8.90%	16.70%
		Wholesale Musical Instrument	4649: Wholesale of other household goods	0.45%	1.70%
	Promotion, Management & Agency Related Activities	Promotion, Management & Agency Related Activities	8299: Other business support service activities n.e.c.	0.10%	0.20%
	Recording	Recording Media Mfr	2680: Manufacture of magnetic and optical media	98.00%	97.30%
			5912: Motion picture, video and television programme post-production activities	17.50%	49.00%
		Recording Studios	5920: Sound recording and music publishing activities	43.50%	29.70%
			1820: Reproduction of recorded media	95.30%	88.80%
			5920: Sound recording and music publishing activities	9.10%	4.40%
	Retail & Distribution of Recordings	Retail of Recorded Music	4763: Retail sale of music and video recordings in specialised stores	87.30%	91.00%
Wholesale of Recorded Music		4643: Wholesale of electrical household appliances	1.70%	6.00%	

Sector	Segment	Sub-Segment	SIC	Firm Coefficient	Emp Coefficient
Performing Arts	Arts Facilities	Arts Facilities	7990: Other reservation service and related activities	12.10%	18.90%
		Arts Facilities	9004: Operation of arts facilities	22.40%	26.90%
	Backstage	Backstage	9001: Performing arts	41.60%	39.50%
	Other Entertainment Activities	Other Entertainment Activities	7990: Other reservation service and related activities	0.00%	0.00%
			9001: Performing arts	56.50%	56.90%
			9002: Support activities to performing arts	28.50%	47.50%
	Performing Arts Education	Performing Arts Education	9329: Other amusement and recreation activities	7.10%	32.70%
			8552: Cultural education	81.20%	62.50%

Source: TBR 2010

All coefficients were derived through examining the business activity description of each business within each SIC code using TCR data. Employment estimates were then calculated by applying each coefficient to the relevant SIC's employment. After this step has been carried out, the proportioned employment of each SOC in the CCS definition is then removed from each SIC in order to avoid double counting.

As mentioned above 100 per cent of all SOC employment was used, except in the case of SOC 2451 (librarians) and 2452 (archivists and curators). In these two cases Creative & Cultural Skills is only interested in librarians and archivists & curators in museums (SIC 9102), so in both cases only the employment that occurred in the museums SIC was used.

The SOCs in the definition were placed in two segments as follows:

Table 106: 4-digit SOC Sub-Segment definition

Sub-Sector	Segment	Sub-Segment	SOC
Music	Composition of Musical Works & Music Publishing	Composers	3415: Musicians
	Live Performance	Musicians	3415: Musicians
	Production, Retail & Distribution of Musical Instruments / Audio Equipment	Musical instrument makers and tuners	5494: Musical instrument makers and tuners
Performing Arts	Actors/Entertainers	Actors/Entertainers	3413: Actors Entertainers
	Arts Officers, Producers, Directors	Arts Officers, Producers, Directors	3416: Arts Officers
	Dancers/Choreographer	Dancers/Choreographer	3414: Dancers

Source: TBR 2010

Craft

In order to estimate total Craft firms and employment a combination of data from 50 SICs was used. Below show examples from the Glass and Iron & Metal categories of craft.

Table 107: Craft SICs

Segment	SIC	Firm Coefficient	Emp Coefficient
Glass	2312: Shaping and processing of flat glass	37.20%	10.50%
	2313: Manufacture of hollow glass	16.00%	1.60%
	2319: Manufacture and processing of other glass, including technical glassware	9.50%	4.30%
Iron & Metals	2512: Manufacture of doors and windows of metal	1.70%	0.40%
	2550: Forging, pressing, stamping and roll-forming of metal; powder metallurgy	36.00%	13.20%
	2561: Treatment and coating of metals	19.30%	8.20%
	4332: Joinery installation	0.00%	0.00%
	9003: Artistic creation	0.30%	0.40%

Creative and Cultural Industries Workforce Survey

Commissioned in August 2009, this research is the result of extensive desk research, data analysis and consultation with employers and stakeholders across the sector, including:

A detailed desk research exercise to review the relevant literature to date in order to understand the context within which the research was conducted.

A telephone survey⁵⁷ with 1,000 employers across the UK and across the Creative & Cultural Skills footprint. The contact list was randomly generated to cover a representative sample of businesses across each of the sectors, by business size or by nation. At the time this also included the advertising sector. The survey was completed between September and November 2009, a year after the financial crash of 2008 and included questions on:

- The profile of the workforce
- Business performance
- Skills shortages and recruitment difficulties
- Skills gaps in the existing workforce
- The use of and investment in training
- Future skills needs.

The intention with the survey was to produce data that could be broadly compared with the types of analysis available in the NESS survey, but with more specific analysis from a creative and cultural perspective.

In-depth case study interviews with 10 organisations across the UK, specifically selected as those with a reputation for success and high achievement in order to explore the factors behind this success and linkage to investment in skills.

Industry workshops with 6 sub-sectors (craft, design, cultural heritage, visual art, literature and performing art) and in-depth interviews in advertising and music in order to test the interim research outputs and discuss future strategies for growth.

⁵⁷ With the option to self-complete online

A quantitative analysis of the kind of behaviours that make businesses more productive. Using series of datasets from the Annual Business Inquiry (ABI) and the Annual Population Survey (APS) a range of training and other workforce statistics were assessed, across the economy, in order to understand their contribution to the generation of high levels of Gross Value Added (GVA) per head. Data was investigated using logistic regression, which is a method for predicting group membership from other independent variables. Using this method, businesses were allocated to quartiles according to their GVA per head, in order to identify the training behaviours and characteristics that most distinguished between high and low productivity.

Creative Skillset's 2010 Creative Media Workforce Survey

The goal of this survey is to gather accurate intelligence on working patterns, current and future skills development needs, existing provision of learning or skills development, barriers experienced to receiving learning or skills development, and demographics.

The scope of the survey is all people employed in Animation, Computer Games, Facilities, Film (including Distribution, Exhibition and Production), Interactive Media. Other Content Creation (pop promos, corporate and commercials production), Photo Imaging, Publishing, Radio, Television. The survey excludes advertising and fashion and textiles which at the time of survey inception had only just come into Creative Skillset's footprint.

Fieldwork began in June 2010, with the distribution of online surveys. The survey was distributed in conjunction with an employer survey by asking participating employers to circulate and promote the survey among their workforce. It was originally hoped that 25 per cent + of workforce survey completes would come through this route. However only 30 completed surveys came through the unique links sent to employers. Separate to these traceable links sent to employers, several hundred completers stated that they had been forwarded the generic link to the survey by their employer. Large employers were dealt with individually to facilitate distribution to key sections of the workforce in the radio and television sectors. In addition many other employers were encouraged to distribute the link via a source other than the employer survey interview.

The survey was also promoted and distributed continuously by trade associations, membership organisations, guilds, unions and the trade press. Due to the high number of organisations involved it is impossible to assess the number of survey links sent out to individual sectors.

The completion rate per 'click' (i.e. entry to the survey link) was around 40 per cent across the total fieldwork period (from 5,600 clicks). This and the relatively low take up of the online survey were investigated and actions taken to improve response.

The respondent's sub-sector of employment (current, previous, recent and sought) were asked in one grid question initially. An analysis of the point at which non-completers were 'dropping out' of the survey (conducted on 9th June 2010) revealed that some 42 per cent of drop outs occurred at this early point with intermittent and comparatively insignificant rates throughout the rest of the questionnaire. It is typical for drop-outs to happen early on in any questionnaire (on 9th June, 24 per cent had dropped out at the introduction screen). However, this level was considered too high. In turn, the sector collection question and communications messages on the initial screen were amended.

In addition to the electronic phase of the survey distribution, over 5,000 hard copy forms were distributed to the film sector:

Furthermore, a telephone survey of freelance workers in the Film and Television sectors in Scotland, was carried out in conjunction with Skills Development Scotland (SDS). A sample of 730 freelance workers was supplied by SDS and Filmbang from which 246 interviews were achieved.

Overall, a total of 3,027 responses were received, representing around 0.7 per cent of the workforce in scope to the survey. It is not possible to calculate or estimate response rates due to the complex, multiple modes of distribution, in particular as it is impossible to know how many employers circulated the survey to their workforce, or if they did, to how many people. It is not always possible to estimate how many individuals from specific sectors would have received an electronic link to the survey through a union, membership organisation, or other source. The proportion of the workforce covered by the survey varies a lot between sectors, being lowest in facilities, publishing and photo imaging, and highest in film, interactive media, television and animation.

The sectors covered by the survey are broken down in the 'conventional' manner applied to previous and other current Creative Skillset research and policy. In the case of television, film and publishing, data are shown at sub-sector level.

To account for varying levels of representativeness between sectors, and in order to achieve total figures representative of the Industries in scope, weightings have been applied to each sector based on information from Creative Skillset's (2009) *Employment Census*, analysis of unit lists for 2009 feature film productions and the *Labour Force Survey*.

Data was also weighted by contract type (employees and freelancers) and then weighted by region/nation to ensure the final sample was representative.

No population data is available for a number of categories, in these instances the corresponding data were given a flat weight of 1. These are: Other TV, Other Film, another Creative Media Industry, those not currently employed in CMI but seeking work.

A decision was made to also apply a weight of 1 to records classed as 'Other publishing'. Because the number of responses from members of the 'Other publishing' workforce was low (45 responses) and the estimated population high (56,394), the weighting ratio was considered too great to be applied with any confidence for the data.

Creative Skillset's 2010 Creative Media Employer Survey

The goal of this survey is to gather accurate intelligence on recruitment issues, current and future skill needs, qualifications and learning and development.

The scope of the survey is all people employed in Animation, Computer Games, Facilities, Film (including Distribution, Exhibition and Production), Interactive Media, Other Content Creation (pop promos, corporate and commercials production), Photo Imaging, Publishing, Radio, Television. The survey excludes advertising and fashion and textiles which at the time of survey inception had only just come into Creative Skillset's footprint.

The fieldwork took place between June – September 2010, primarily by way of a telephone survey of employers known to be operating in any of the sectors in scope, with a follow-up approach to employers in some sectors to complete the survey online during the later stages of the fieldwork. The sample frame was compiled by collating a comprehensive company database from relevant directories, databases and trade association memberships.

A total of 2,634 surveys were completed, of which 2,500 were over the telephone and 134 online. It is not possible or appropriate to estimate response rates as target response numbers were set for each sector, which in most cases were met. A total ceiling of 2,500 completed telephone surveys was set in order to manage survey costs. Inevitably, successful completion and screening rates vary between sectors. Overall, an estimated eight per cent of employers in scope participated in the survey, with considerable variation between sectors.

Efforts to secure response from employers working in the Computer Games and Visual Effects (VFX) sectors were focussed on NESTA's Employer Survey, developed with Creative Skillset in order to inform the Livingstone/Hope review of the video games and visual effects industries.⁵⁸

To account for varying levels of representativeness between sectors, 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 Creative Skillset's company database and official data sources

Mapping Creative Media and Fashion & Textiles Relevant Education and Learning and Development Provision in FE and HE in the UK (2012)

This work was undertaken during 2010 by Research-as-Evidence, with on-going support and input from the Creative Skillset research team and sector managers. The project was updated in 2012.

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

This is the first time that Creative 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)⁵⁹ have been used in this way - and the first detailed analysis of the outcomes from HE/FE provision that Creative 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 Creative 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 Creative Skillset industry sectors.

⁵⁸ Next Gen. Transforming the UK into the world's leading talent hub for the video games and visual effects industries, NESTA (2010)

⁵⁹ See www.theia.org.uk/ilr for more details.

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 terms that assesses the relevance of each course to specific key sectors and the overall responsibilities of Creative 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 Creative Skillset relevant and non-Creative 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 Creative 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

The qualitative framework 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 Creative 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).

Creative 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 Creative 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.

Creative 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). 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. Creative Skillset's Employer Database was used to target companies and information from Creative 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 Creative 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 Creative Skillset's 2006 Employment Census.

Key issues for consideration when using Sector Skills Council labour market information sources

Due to the complex make-up of the Creative Media and Entertainment sector there are a several key issues to consider which affect some or all of the SSC labour market information sources to a lesser or greater extent. These key issues are as follows:

- The different information sources include differing elements of the Creative Media and Entertainment sector. For example, publishing and photo imaging are included in some sources and not others. Advertising and fashion and textiles are not included in any sources unless it specifically states so. Where specific industries have not been included in sources information has been supplemented by official data sources where possible.

- It is often not possible to calculate or estimate exact response rates due to the complex, multiple modes of distribution. This is particularly difficult in primary research with individuals e.g. it is highly difficult to monitor how many employers circulated the survey to their workforce and to how many people or how many individuals from specific sectors would have received an electronic link to the survey through a union, membership organisation, or other source. The proportion of the workforce covered by a survey can vary a lot between sectors though through a process of weighting and cross-checking gives us confidence that we have achieved a representative sample.
- Falling response rates are an ongoing issue for surveys in an environment where respondents are very busy and with an increasing amount of research activity may also suffer from survey fatigue. The scale of this problem differs from project to project though it is an ever increasing issue when developing primary research.
- The impact of the 2008-2009 economic crisis on employment/workforce statistics could potentially be an issue. As such the fieldwork period of primary research is a key consideration.

Appendix 2 – SSA scope mapped to SSC footprint

Table 108: SIC mapped to Creative Media and Entertainment SSA scope

SSA sector	SIC code	Description	SIC within scope that are in Creative Skillset/Creative & Cultural Skills footprint	SIC within scope that are in another SSC's footprint
Creative Media and Entertainment	58	Publishing	58.11 Book Publishing	58.21 Publishing of Computer Games
			58.12 Publishing of Directories & Mailing Lists	58.28 Other software publishing
			58.13 Newspaper Publishing	
			58.14 Publishing of Journals & Periodicals	
			58.19 Other Publishing	
	59	Motion pictures	59.11/1 Motion Picture Production activities	
			59.11/2 Video Production activities	
			59.11/3 TV Programme Production activities	
			59.12 MP, V, and TV Programme Post-Production	
			59.13/1 Motion Picture Distribution activities	
			59.13/2 Video Distribution activities	
			59.13/3 TV Programme Distribution activities	
			59.14 Motion Picture Projection activities	
			59.20 Sound Recording and Music Publishing Activities	
	60	Programming and broadcasting	60.1 Radio Broadcasting	
			60.2 TV Programming & Broadcasting activities	
	73	Advertising and market research	73.11 Advertising Agencies	73.20 Market research and opinion polling
			73.12 Media Representation Services	
	74	Other professional scientific and technical activities (nb: includes design, photographic, translation)	74.10 Speciality Design	74.30 Translation and interpretation activities
			74.20/1 Portrait Photographic activities	74.90/1 Environmental consulting activities
			74.20/2 Other Specialist Photography	74.90/2 Quantity surveying activities
			74.20/3 Film Processing	74.90/9 Other professional, scientific and technical activities n.e.c.
	74.20/9 Other Photographic activities			
90	Creative arts and	90.01 Performing Arts		

SSA sector	SIC code	Description	SIC within scope that are in Creative Skillset/Creative & Cultural Skills footprint	SIC within scope that are in another SSC's footprint
		entertainment	90.02 Support Activity to Supporting Arts	
			90.03 Artistic Creation	
			90.04 Operation of Arts Facilities	
	91	Libraries, archives, museums, etc	91.01 Libraries and Archive Activities	91.04 Botanical and zoological gardens and nature reserves activities
			91.02 Museum Activities	
			91.03 Operation of Historical Sites and Buildings and Similar Visitor Attractions	

Table 109: Other SSC footprint SIC (exc Fashion & Textiles) mapped to other SSAs

SSA sector	SIC code	Description	Creative Skillset/Creative & Cultural Skills footprint SIC	Other SIC of interest to SSCs
Manufacture	18	Printing and reproduction of recorded media	18.20/2 Reproduction of video recording	18.20/3 Reproduction of Computer Media
	31	Manufacture of furniture		31.12 Manufacture of jewellery and other related articles
				31.13 Manufacture of imitation jewellery and other related articles
32	Other Manufacture		32.20 Manufacture of musical instruments	
Information & Communication	62	Computer programming, consultancy and related activities		62.01/1 Ready-made interactive leisure and entertainment software development
				62.01/2 Business and domestic software development
				62.02 Computer consultancy activities
	63	Information Service activities		63.91 News Agency activities
63.99 Other information Service activities n.e.c.				

Appendix 3 – Limitations 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, Publishing and Advertising but less useful for classifying the rest of the industry. As noted earlier:

- Key elements of the Creative Media and Entertainment sector sit in broad classifications that include activity outside of the sector 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, Northern Ireland and Wales are far too small to be published by official data sources for most SIC.

The Creative Media Industries and DCMS with Creative 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 (excluding 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.

Appendix 4 – SIC defined workforce size estimates mapped to SSC defined sectors and workforce size estimates

SIC mapped to Creative Skillset footprint (including workforce estimates)

LABOUR FORCE SURVEY ⁶⁰			CREATIVE SKILLSET ⁶¹		
INDUSTRIES			INDUSTRIES		
SIC 2007	Description	Total Employed	Main Sector	Sub-sector	Total Employed
60.2	TV Programming & Broadcasting activities	36,950	Television	Broadcast TV	15,750
59.11	Motion Picture, Video and TV Programme Production activities	55,750 ⁶²		Cable and Satellite	12,700
59.13	Motion Picture, Video and TV Programme Distribution activities	7,000 ⁶³		Independent Production	21,700
				Sub-total	50,150
			Film	Film Production	11,500
				Film Distribution	1,200
59.14	Motion Picture Projection activities	10,550		Cinema Exhibition	17,650
				Moving Picture Archives and	300
				Sub-total	30,650
			Other Content	Animation	4,300
				Commercials and Pop Promos	4,100
18.20/2	Reproduction of video recording ⁶⁴	-		Corporate Production	3,950
	Sub-total	110,250		Sub-total	12,350
60.1	Radio Broadcasting	17,350	Radio	Broadcast Radio	19,900
				Independent Production	1,000

⁶⁰ ONS Labour Force Survey Jan-Dec 2010.

⁶¹ Skillset (2009) Employment Census except for Publishing, Photo Imaging, Advertising, Creative Occupations outside the industry and other business sectors of interest.

⁶² This figure covers production activities for TV, Film and Other Content Creation

⁶³ This figure covers distribution activities for TV, Film and Other Content Creation

⁶⁴ At a four digit level SIC code 18.20 – Reproduction of recorded media employs 3,500.

LABOUR FORCE SURVEY ⁶⁰			CREATIVE SKILLSET ⁶¹		
	Sub-total	17,350		Sub-total	20,900
59.12	MP, V, and TV Programme Post-Production	5,700	Facilities	Post Production	7,450
				Studio and Equipment Hire	5,900
				Outside Broadcast	300
				VFX	6,900
				Special Physical Effects	700
				Manufacture of AV Equipment	2,900
				Processing Labs	300
				Other Services for Film and TV	18,600
	Sub-total	5,700		Sub-total	43,050
			Interactive Media	Interactive Media	34,250
				Sub-total	34,250
			Content for Computer Games	Content and Development	7,000
				Sub-total	7,000
			Additional Available Freelancers		50,000
74.2	Photographic activities	43,100	Photo Imaging⁶⁵	Photographic activities	43,100
	Sub-total	43,100		Sub-total	43,100
58.11	Book Publishing	33,850	Publishing⁶⁶	Book Publishing	33,850
58.12	Publishing of Directories & Mailing Lists	1,850		Publishing of Directories & Mailing	1,850
58.13	Publishing of Newspapers	51,800		Publishing of Newspapers	51,800
58.14	Publishing of Journals & Periodicals	50,500		Publishing of Journals & Periodicals	50,500
63.91	News Agency activities	7,300		News Agency activities	7,300
63.99	Other information Service activities n.e.c.	11,900		Other information Service activities	11,900
58.19	Other Publishing	38,500		Other Publishing	38,500

⁶⁵ ONS LFS Jan-Dec 2010

⁶⁶ Ibid

LABOUR FORCE SURVEY ⁶⁰			CREATIVE SKILLSET ⁶¹		
	Sub-total	194,650		Sub-total	194,650
73.11	Advertising Agencies	83,600	Advertising⁶⁷	Advertising Agencies	83,600
73.12	Media Representation Services	21,750		Media Representation Services	21,750
	Sub-total	105,350		Sub-total	105,350
	TOTAL	476,400		TOTAL	591,450

OTHER BUSINESS SECTORS OF INTEREST ⁶⁸			OTHER BUSINESS SECTORS OF INTEREST ⁶⁹		
SIC 2007	Description	Total Employed	Main Sector	Sub-sector	Total Employed
18.20/3	Reproduction of Computer Media ⁷⁰	-	Content for Computer Games	Reproduction of Computer Media	-
58.21	Publishing of Computer Games	2,850		Publishing of Computer Games	2,850
62.01	Computer programming activities	198,150		Computer programming activities	198,150
62.02	Computer consultancy activities	203,350	Interactive Media	Computer consultancy activities	203,350
63.12	Web portals	1,450		Web portals	1,100
	TOTAL	405,800		TOTAL	405,800

NB: '-' indicates data not available. All LFS data include all people working and not just those of working age.

⁶⁷ Ibid

⁶⁸ 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 sectors included represent areas where there is a Creative Media interest.

⁶⁹ Ibid

⁷⁰ At a four digit level SIC code 18.20 – Reproduction of recorded media employs 3,500.

SIC mapped to Creative & Cultural Skills footprint (including workforce estimates)

LABOUR FORCE SURVEY			CREATIVE & CULTURAL SKILLS ⁷¹		
			Arts Agencies	Arts related Membership	1,330
				Theatrical & Artistic Agencies	1,210
				Sub-total	2,540
32.12	Manufacture of Jewellery and Other Related	8,600	Craft⁷²	Glass	1,200
32.13	Manufacture of Imitation Jewellery and Other	2,050		Graphic Arts	37,780
				Heritage and Rural Crafts	3,410
				Iron and Metals	1,800
				Jewellery	7,640
				Pottery and Ceramics	1,820
				Stone	8,290
				Taxidermist	-
				Textiles	9,010
				Wood	5,000
	Sub-total	10,650		Sub-total	75,940
91.02	Museum Activities	35,500	Cultural Heritage	Archaeology	7,730
91.03	Operation of Historical Sites and Buildings and	6,350		Built Heritage	6,640
				Archives	810
				Archivists / Curators in Museums	3,690
				Libraries in Museums	570
				Museum Activities	34,040
				Private Libraries	-
				Related Membership Organisations	-
	Sub-total	41,850		Sub-total	53,790
74.10	Speciality Design		Design	Communications, Interior and	143,380
				Product and Industrial	117,090
				Stage and Set	2,990

⁷¹ Creative & Cultural Skills (2010) Creative and Cultural Industries Impact and Footprint 2010/11

⁷² Although craft is outside the remit of this SSA it is considered an important part of Creative & Cultural Skills footprint and is included here for reference.

LABOUR FORCE SURVEY			CREATIVE & CULTURAL SKILLS ⁷¹		
	Sub-total	99,550		Sub-total	263,470
90	Creative Arts and Entertainment		Literature	Artistic and Literary Creation	22,880
90.01	Performing Arts	50,750		Authors / Writers	58,220
90.02	Support Activities to Supporting Arts	13,000		Sub-total	81,100
90.03	Artistic Creation	63,650	Music	Composition of Musical Works	8,760
90.04	Operation of Arts Facilities	26,100		Live Performance	51,580
				Musical Education	6,970
				Production, Retail, Distribution of	33,390
				Promotion and Management	1,300
				Recording	14,530
				Production and Distribution of	7,880
				Sub-total	124,420
			Performing arts	Actors / Entertainers	34,270
				Arts Facilities	9,940
				Arts Officers, Producers, Directors	39,370
				Backstage	6,970
				Dancers / Choreographers	4,040
				Other Entertainment Activities	37,460
				Performing Arts Education	15,980
				Sub-total	148,030
			Visual Arts	Art retail	3,520
				Artists	39,310
				Visual Arts Education	2,060
	Sub-total	153,500		Sub-total	44,890
32.2	Manufacture of Musical Instruments	-			
	Sub-total	-			
59.20	Sound Recording and Music Publishing	12,100			
	Sub-total	12,100			
	TOTAL	317,650		TOTAL	794,160

In generating accurate employment figures for the creative and cultural industries Creative & Cultural Skills generate co-efficients to analyse individual SIC and SOC codes with. The table below shows the range of SIC codes used to generate such employment figures. The actual co-efficients themselves are shown in the methodology section in the technical appendix.

SIC Code	Description	SIC Type	Sub-Sector
32.12	Manufacture of Jewellery and Other Related Articles	Licensed	Craft
32.13	Manufacture of Imitation Jewellery and Other Related Articles	Licensed	Craft
32.2	Manufacture of Musical Instruments	Licensed	Music
59.20	Sound Recording and Music Publishing Activities	Licensed	Music
74.10	Speciality Design	Licensed	Design
90.01	Performing Arts	Licensed	Performing Arts
90.02	Support Activities to Supporting Arts	Licensed	Design
90.03	Artistic Creation	Licensed	Literature
90.04	Operation of Arts Facilities	Licensed	Music
91.02	Museum Activities	Licensed	Cultural Heritage
91.03	Operation of Historical Sites and Buildings and Similar Visitor Attractions	Licensed	Cultural Heritage
26.4	Manufacture of Consumer Electronics	Collaborative	Music
46.43	Wholesale of electrical household appliances	Collaborative	Music
47.59/1	Sale of Musical Instruments and scores in Specialised Shops	Collaborative	Music
47.6	Retail Sale of Cultural and Recreation Goods in Specialised Stores	Collaborative	Music
47.63	Retail Sale of Music and Video Recordings in Specialised Stores	Collaborative	Music
47.78	Commercial Arts Galleries	Collaborative	Visual Arts
78.10/1	Motion Picture, Television and other Theatrical Casting	Collaborative	Performing Arts
85.52	Cultural Education	Collaborative	Music, Performing Arts, Visual Arts
91.01	Libraries and Archive Activities	Collaborative	Cultural Heritage
94.1	Activities of Businesses, employers and other professional organisations	Collaborative	Agencies & Organisations
94.99	Activities of Other Membership Organisations	Collaborative	Agencies & Organisations
SOC			
2126	Design & development engineers	Exclusive	Design
2451	Librarians	Exclusive	Cultural Heritage
3411	Artists	Exclusive	Visual Arts

SIC Code	Description	SIC Type	Sub-Sector
3412	Authors / Writers	Exclusive	Literature
3413	Actors / Entertainers	Exclusive	Performing Arts
3414	Dancers	Exclusive	Performing Arts
3415	Music	Exclusive	Music
5494	Musical instrument makers and tuners	Exclusive	Music
2452	Archivists and curators	Additional	Design
3416	Arts officers	Additional	Literature
3421	Graphics designers	Additional	Music

Additional business categories of interest in generating Creative & Cultural Skills full footprint: SIC codes associated with craft.

The table below shows the additional SIC codes that Creative & Cultural Skills uses to generate craft figures. As before co-efficients are generated to make an estimate of craft activity within these codes. In many instances, these employment co-efficients are small and it is rare within the craft sector that these SIC will be used in their entirety. For a detailed breakdown of the co-efficients used please see the methodology section in the technical appendix.

Segment	SIC
Glass	2312: Shaping and processing of flat glass
	2313: Manufacture of hollow glass
	2319: Manufacture and processing of other glass, including technical glassware
Graphic Crafts	1629: Manufacture of other products of wood; manufacture of articles of cork, straw and plaiting
	1723: Manufacture of paper stationery
	1812: Other printing
	1813: Pre-press and pre-media services
	1814: Binding and related services
	3299: Other manufacturing n.e.c.
	5819: Other publishing activities
9003: Artistic creation	
Heritage and Rural Crafts	1629: Manufacture of other products of wood; manufacture of articles of cork, straw and plaiting
	2573: Manufacture of tools
	4332: Joinery installation

Segment	SIC
	4333: Floor and wall covering
	4334: Painting and glazing
	4391: Roofing activities
	4399: Other specialised construction activities n.e.c.
Iron & Metals	2512: Manufacture of doors and windows of metal
	2550: Forging, pressing, stamping and roll-forming of metal; powder metallurgy
	2561: Treatment and coating of metals
	4332: Joinery installation
	9003: Artistic creation
Jewellery	2652: Manufacture of watches and clocks
	3212: Manufacture of jewellery and related articles
	3213: Manufacture of imitation jewellery and related articles
Pottery & Ceramics	2331: Manufacture of ceramic tiles and flags
	2341: Manufacture of ceramic household and ornamental articles
	9003: Artistic creation
Stone	2370: Cutting, shaping and finishing of stone
	4399: Other specialised construction activities n.e.c.
	9003: Artistic creation
Taxidermist	3299: Other manufacturing n.e.c.
Textiles	1330: Finishing of textiles
	1392: Manufacture of made-up textile articles, except apparel
	1393: Manufacture of carpets and rugs
Textiles	1411: Manufacture of leather clothes
	1412: Manufacture of workwear
	1413: Manufacture of other outerwear
	1414: Manufacture of underwear
	1419: Manufacture of other wearing apparel and accessories
	1431: Manufacture of knitted and crocheted hosiery
	1439: Manufacture of other knitted and crocheted apparel

Segment	SIC
	1511: Tanning and dressing of leather; dressing and dyeing of fur
	1512: Manufacture of luggage, handbags and the like, saddlery and harness
	3299: Other manufacturing n.e.c.
	7410: Specialised design activities
Wood	1623: Manufacture of other builders' carpentry and joinery
	1624: Manufacture of wooden containers
	1629: Manufacture of other products of wood; manufacture of articles of cork, straw and plaiting
	3101: Manufacture of office and shop furniture
	3102: Manufacture of kitchen furniture
	3109: Manufacture of other furniture
	3299: Other manufacturing n.e.c.
	4332: Joinery installation
	9003: Artistic creation
	9524: Repair of furniture and home furnishings

Appendix 5 – Skills Shortages and Gaps within SSC sub-sectors

The following table is a summary of the most prevalent skills shortages and gaps identified within the specific sub-sectors of the Creative Media and Entertainment sector. Each offers additional contextualisation of the issues explored within Chapter 5.

Sub-sector	Skills shortages	Skills gaps
Television	Broad areas of skill need include leadership and management; Creative talent; Sales and marketing; Multi-skilling; Skills using specialist software packages.	Leadership and management; Sales and marketing; Creative talent; Skills in using specialist software packages; Technical skills (e.g. editing, TV/video production, camera and sound skills the highest)
Film	Difficulties obtaining applicants direct from education; Broad skill areas most commonly cited are leadership and management; Sales and marketing	Sales and marketing; Use of software packages; Business skills (ref. business planning/strategy).
Radio	Leadership and management; Sales and marketing; Multiskilling; Finance skills	Sales and marketing; Leadership and management; Finance skills; Business skills; Multi-skilling; Technical skills
Animation	The use specialist software packages; Multi-skilling; Finance; Leadership and management; Sales and marketing	Technical skills (mainly CGI:3D/Animation/VFX/Graphic design and computer usage); Skills in using software packages; Multi-skilling; Sales and marketing and skills for developing content across platforms; Production skills; Business skills.
Facilities	Leadership and management; Multi-skilling; Sales and marketing; Skills in specialist software packages	Sales and marketing; Leadership and management; Multiskilling; Business skills; Technical skills; Multi-skilling with software packages also important.
Interactive Media	Technical skills (commonly computer programming); Leadership and management; Business skills; Skills in using software packages; Skills for developing multi-platform content (mainly mobile applications, web sites and web applications.)	Technical skills (Commonly computer programming; Leadership and management; Business skills Software packages
Photo imaging	Sales and marketing; Leadership and management; Skills in using software packages; Multi-skilling	Sales and marketing; Specialist software packages; Technical skills including computer programming and usage
Publishing	n/a	Multi-platform skills; Management and leadership; Commercial/business skills and Sales skills; Digital strategy and planning; Creative technology and creatives that understand digital.

Sub-sector	Skills shortages	Skills gaps
Craft	Specialist technical skills, Lack of experience. Business planning, Marketing and PR, Bookkeeping, Pricing and selling	Specialist technical skills, Lack of experience, Business planning, Marketing and PR, Bookkeeping, Pricing and selling
Cultural Heritage	Disciplines such as Art handling, Collection management techniques, Painting, Sculpture, Photography conservation and digital archiving	Lack of experience. Generic skills needs such as HR; Learning and finance; the skills and knowledge to; Build both green and funding sustainability; The development of improved e-skills for the sector – although this is a near-universal need that could be addressed, in part, through integration with specialist training in other disciplines.
Design	A gap between the design industry and design education and training in the UK. The gap is illustrated most acutely by: lack of business and professional skills in designers; lack of professional experience in design graduates; the need to bring design education closer to design industry	The design sector urgently needs to build up technical skills (demanded by environmental design), skills in multidisciplinary working and more innovative business skills in order to keep up with increasing competition from abroad.
Music	Specialist and transferable skills; Experience, Composition, Live events management, Technical and backstage live events	Lack of experience; Management and musicianship skills. Specialist and transferable skills; Experience, Composition, Live events management, Technical and backstage live events
Literature	Business knowledge, Marketing and promotion skills, Event management, Fundraising and Administrative skills	Editorial skills; Administration skills; Management and marketing roles
Visual Arts	Lack of Specialist skills, Community arts, Technical creative skills	Retail/sales, Administration and management, Community arts
Performing Arts	Specialist skills (also on HTF scale could include lack of applicants.), Technical theatre and Backstage skills, Live event management, Community arts	Management, Marketing, Entertainers and Administration roles, Technical theatre and backstage skills, Live event management, Community arts

Source: *Creative Skillset (2010a and 2010e)* and *Creative & Cultural Skills (2010a)*



The UK Commission for Employment and Skills is a social partnership, led by Commissioners from large and small employers, trade unions and the voluntary sector. Our mission is to raise skill levels to help drive enterprise, create more and better jobs and economic growth.

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