INTERACTIVE MEDIA SKILLS GAPS: AN ANALYSIS BASED ON COURSE PROVISION

INTERREG IVA Region
Northern Ireland (excluding Belfast and Greater Belfast), western Scotland and the six Republic of Ireland border counties
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1. INTRODUCTION

Honeycomb - Creative Works is a £3.58 million programme targeted at the digital content sector across the INTERREG IVA region of Northern Ireland, the six border counties of the Republic of Ireland and the western seaboard of Scotland. The programme is being delivered by a partnership led by the Ulster University and comprising Dundalk Institute of Technology, Creative Skillset and the University of the West of Scotland. Honeycomb addresses the economic, educational, social and cultural needs of the sector by focusing on SMEs, organisations and individuals in five digital content sub sectors: film and broadcast; animation; computer gaming; interactive media and music technologies. The project is part-financed by the European Union’s INTERREG IVA cross-border programme managed by the Special EU Programmes Body.

The Honeycomb programme is structured around four themes:

1. Intelligence gathering aims to monitor developments in the digital content industry sub sectors. Under this theme a range of studies are being produced which can inform future policy and ensure the programme is updated in light of new industry requirements.

2. Developing networks of scale aims to improve industry connectedness through its comprehensive networking programme. This theme will increase the sector’s capacity and establish greater links between digital content SMEs, freelancers and start-ups across the three regions.

3. Skills development aims to improve skill levels, addressing the shortfall in sector specific training for the digital content sector.

4. Enterprise development and project finance aims to develop a seed funding programme and investment fund for early stage digital content projects developed by creative enterprises.

This report forms part of the intelligence gathering element of the Honeycomb programme. It is one of a series of skills gap reports produced by Honeycomb’s research group. It assesses the skills supply in the Honeycomb eligible areas by surveying educational courses available in each eligible area, as well as providing a wider overview of student numbers and skills issues in the interactive media sector.

2. INTERACTIVE MEDIA – THE SKILLS PICTURE

2.1 Overview

The interactive media sector covers a range of specialist companies and jobs including the design and development of web sites and web applications, online content, offline multimedia experiences, mobile applications and mobile content. The sector fulfils a key support function in the wider creative industries as well as other industries. This role clouds measurement of the sector’s output and importance - interactive media is becoming more of a discipline than a sector.

Latest estimates reveal that the interactive media sector in Scotland employs around 3,900 people. Approximately 800 businesses are active within the sector in Scotland. More than half (51%) of Scotland’s
interactive media workforce work within the online content sub-sector. Of the Scottish workforce, 16% are freelancers and 38% are female (Creative Skillset, 2011b).

Within Northern Ireland the interactive media sector employs around 2,600 people. The majority (79%) of the interactive media workforce work within the online content sub-sector. Of the Northern Irish workforce, 22% are freelancers and 29% are female (Creative Skillset, 2011a).

In the Republic of Ireland, research has shown the interactive media sector is very concentrated in the Dublin area. In 2005, there were 278 interactive media companies in Dublin with an estimated 3,800 people employed. Five of the largest companies accounted for 40% of employment (Murphy, 2010).

### 2.2 Higher education supply

Tables 2.1, 2.2 and 2.3 below highlight the higher education (HE) courses most relevant to the interactive media sector. Other courses will feed into the sector, though we feel this is a good indication of the potential available talent pool. In Scotland, there are a total of 436 interactive media relevant courses currently being studied by 9,215 students. The corresponding figures for Northern Ireland are 130 courses being studied by 2,665 students.

<table>
<thead>
<tr>
<th>Table 2.1 Number of Interactive Media Relevant HE Course and Students in Scotland and Northern Ireland</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Scotland</strong></td>
</tr>
<tr>
<td><strong>No. Courses</strong></td>
</tr>
<tr>
<td>Computer studies related</td>
</tr>
<tr>
<td>Software and programming</td>
</tr>
<tr>
<td>Electronic and electrical, computer and media related engineering</td>
</tr>
<tr>
<td>Graphic, multimedia and visual design</td>
</tr>
<tr>
<td>Interactive and electronic design</td>
</tr>
<tr>
<td><strong>Total Interactive Media Relevant</strong></td>
</tr>
<tr>
<td><strong>All Students in HE</strong></td>
</tr>
</tbody>
</table>

Source: HESA Student Record 2011/2012

In 2014 there were a total of 5,543 interactive media relevant graduates (undergraduate and postgraduate) from courses in the Republic of Ireland. Honeycomb also analysed data from the Irish University Guide league table and found 87 interactive media relevant undergraduate courses with a total of over 2,800 available places.
Table 2.2 Number of Interactive Media Relevant HE Graduates Republic of Ireland 2013-14

<table>
<thead>
<tr>
<th>Course</th>
<th>No. Courses</th>
<th>Graduates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audio visual techniques and media production</td>
<td>63</td>
<td>835</td>
</tr>
<tr>
<td>Computer science</td>
<td>262</td>
<td>3,107</td>
</tr>
<tr>
<td>Computer use</td>
<td>50</td>
<td>617</td>
</tr>
<tr>
<td>Electronics and automation</td>
<td>87</td>
<td>984</td>
</tr>
<tr>
<td><strong>Total Interactive Media Relevant</strong></td>
<td><strong>462</strong></td>
<td><strong>5,543</strong></td>
</tr>
<tr>
<td>All graduates HE</td>
<td>-</td>
<td>64,725</td>
</tr>
</tbody>
</table>

Source: Higher Education Authority Statistics 2013-14

Table 2.3 Interactive Media relevant CAO courses Republic of Ireland

<table>
<thead>
<tr>
<th>Course</th>
<th>No. Courses</th>
<th>No. places</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer studies related</td>
<td>44</td>
<td>1,744</td>
</tr>
<tr>
<td>Software and programming</td>
<td>13</td>
<td>384</td>
</tr>
<tr>
<td>Electronic and electrical, computer and media related</td>
<td>14</td>
<td>224</td>
</tr>
<tr>
<td>engineering</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graphic, multimedia and visual design</td>
<td>16</td>
<td>456</td>
</tr>
<tr>
<td>Interactive and electronic design</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total Interactive Media Relevant</strong></td>
<td><strong>87</strong></td>
<td><strong>2,808</strong></td>
</tr>
</tbody>
</table>

Source: Irish University Guide league table 2015

### 2.3 Skills shortages and gaps

The appropriate range and level of skill is vital to the effective development of digital creative industries. In a report on digital and creative industries, the UK Commission for Employment and Skills (2012) identified a growing need for security skills as the need for data protection increases, as well as high level technology specific and multiplatform skills. A key point make in this report is the need for high level skills. The report also highlights that this issue is not just with the quantity of new graduates, but also the quality of their skills. The Honeycomb survey of the interactive media sector across the eligible areas also found that beginner level skills was not of major concern, and skills development at intermediate to advanced level emerged as a greater priority. Further detailed results from the Honeycomb survey which assesses skills issues across the eligible areas is available in the Honeycomb sector development report Smart Moves: Developing the Interactive Media Sector (Honeycomb – Creative Works, 2015). Table 2.4 summaries the findings relating to the main areas of skill assessed for each eligible area, detailing the number of respondents who indicated the area of skill was lacking.
### Table 2.4 Skills issues in the Interactive Media sector in the Honeycomb eligible areas

<table>
<thead>
<tr>
<th></th>
<th>Northern Ireland (excl. Belfast and outer Belfast)¹</th>
<th>Border counties Republic of Ireland²</th>
<th>Western Scotland³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understanding Intellectual Property rights</td>
<td>29%</td>
<td>33%</td>
<td>11%</td>
</tr>
<tr>
<td>Leadership and Management skills</td>
<td>20%</td>
<td>12%</td>
<td>11%</td>
</tr>
<tr>
<td>Sales and Marketing skills</td>
<td>40%</td>
<td>55%</td>
<td>28%</td>
</tr>
<tr>
<td>Business skills</td>
<td>54%</td>
<td>60%</td>
<td>39%</td>
</tr>
<tr>
<td>Skills in using software packages</td>
<td>29%</td>
<td>33%</td>
<td>33%</td>
</tr>
<tr>
<td>Finance skills</td>
<td>40%</td>
<td>31%</td>
<td>28%</td>
</tr>
<tr>
<td>Craft /Technical skills</td>
<td>29%</td>
<td>40%</td>
<td>28%</td>
</tr>
<tr>
<td>Creative talent</td>
<td>11%</td>
<td>29%</td>
<td>17%</td>
</tr>
</tbody>
</table>

**Key**
- Severe concern 50%-100%
- Significant concern 25%-49%
- Moderate concern 1%-24%

Base: ¹35 respondents, ²42 respondents, ³18 respondents.

Creative Skillset research has shown that across Scotland and Northern Ireland the occupations in which skills shortages exist most commonly within interactive media are: technical development, distribution, sales and marketing. Interactive media employers often find it difficult to find the following skills from new entrants direct from education - sales and marketing, skills in using sector specific software packages and multi-skilling. Employers also report shortages in entrants with the appropriate combinations of ‘hybrid’ skills – a mix of specialist skills (e.g. graphic design) and core generic skills (e.g. business/commercial acumen) with cross sector awareness i.e. the ability to provide services to clients from other sectors of the wider economy (Creative Skillset 2011a; 2011b).

Many interactive media employers in Scotland and Northern Ireland highlight sales and marketing as a broad area in which skills gaps exist amongst employees. Computer programming, leadership and management, business skills and skills in using sector specific software packages are also highlighted as skills gap areas (Creative Skillset 2011a; 2011b).
3. INTERACTIVE MEDIA COURSE PROVISION IN THE HONEYCOMB ELIGIBLE AREAS

3.1 Republic of Ireland border counties

Honeycomb carried out a survey of available educational courses related to interactive media in the Republic of Ireland border counties based on information available through Qualifax (The National Learners Database). A total of 106 courses were found (see Figure 3.1 for a breakdown of numbers by type). Short courses were by far the most dominant course type making up just over 46% of the total. Short courses were evening courses running for example between eight and 10 weeks for two to three hours, or for two to three full days. These courses were often specific in their focus, such as developing a particular technical skill or understanding of a software programme.

Figure 3.1 Interactive media course numbers by qualification type – Republic of Ireland border counties

Degree courses (NFQ levels seven and eight) made up just over a quarter of the total. All certificate courses (private and NFQ certified) made up almost a quarter of all courses (courses at NFQ levels five and six are certificate courses and combined these made up almost 18% of all courses. Other certificate courses, e.g.
certified by City and Guilds or Adobe, made up almost 7% of the total). Masters and doctoral education programmes were low making up just under 5% of all courses.

Unsurprisingly, there was a clear concentration of courses in counties where institutes of technology are located. Almost 25% of courses were located in county Sligo, where the Institute of Technology Sligo is located. Just over 29% were in county Donegal where Letterkenny Institute of Technology is located and almost 36% in county Louth, where Dundalk Institute of Technology is situated.

### 3.2 Northern Ireland (excluding Belfast and greater Belfast)

Honeycomb carried out a survey of available educational courses related to interactive media in the Northern Ireland eligible area. A number of sources were used, such as Qualifax (The National Learners Database), the UCAS and Colleges NI websites, as well as college and university websites and prospectus brochures. A total of 77 courses were found (see Figure 3.2 for a breakdown of numbers by type).

**Figure 3.2 Interactive media course numbers by qualification type – Northern Ireland (excluding Belfast and Greater Belfast)**

![Figure 3.2](image)

Postgraduate courses (postgraduate diploma, masters, doctorate) made up just over 9% of the courses surveyed. Degree courses (honours and foundation) made up just over 35% and diplomas (BTEC levels 2, 3, 4 and 5) just over 45%. The remainder (just over 10%) were short courses.

There was a clear geographic concentration of courses in the Northern Ireland eligible area. Over half (55%) of the courses identified were concentrated in county Londonderry.
3.3 Western seaboard of Scotland

Honeycomb carried out a survey of available educational courses related to interactive media in the western Scotland eligible area. A number of sources were used, such as the UCAS website, as well as college and university websites and prospectus brochures. A total of 70 courses were found (see Figure 3.3 for a breakdown of numbers by type).

**Figure 3.3 Interactive media course numbers by qualification type – western seaboard of Scotland**

Short courses were most predominant, making up over 41% of the total. Degree courses (ordinary level - SCQF level 9 and honours level - SCQF 10) made up 30% of the courses surveyed in the western Scotland eligible area. Almost 16% were higher national certificate and diploma courses (SCQF level 7 and 8). The remaining 13% of courses were at SCQF levels 4, 5 and 6. No post-graduate courses were identified. The highest SCQF (Scottish Credit and Qualifications Framework) level identified in the eligible area was a level 10 course.

Geographically courses were highly concentrated in the south-west of the western Scotland eligible area in the Dumfries and Galloway and Ayrshire areas.

4. BEST PRACTICE IN INTERACTIVE MEDIA EDUCATION AND TRAINING

This section provides examples of best practice education and training provision outside of the Honeycomb eligible areas at the following levels:

- Postgraduate
4.1 Postgraduate courses

Course Title: **MA/MSc Interactive Digital Media**  
Teaching Institution: Ravensbourne  
Duration: 1 year full time / 2 years part time

**Overview:** This course focuses on ‘the practical and theoretical study of interactivity including digital production, prototyping and experiential practice’. It aims to ‘create designers with the potential to innovate and influence interaction design practice who can realise relevant and elegant design proposals with commercial potential’. It offers students experience of creating for Android, Blackberry, iPad, iPhone, iPod, Playstation3, Xbox and websites and provides training on relevant multimedia software, 3D graphics software, game engines/modelling packages including Unity, UdK, 3D Studio Max and Maya. In addition, it has a facility for analysing and evaluating console games, containing PS3, XBox 360, and Wii consoles, new games titles and 3D LCD screens. It is aimed at practitioners/designers wanting to develop their practice in interaction design, installation, projection mapping, digital games and user-centered product design.

**Course Content/Structure**

- **Technology Issues** — students conduct both group and cross-disciplinary work exploring the potential of digital technology and its application in new services/products or to enhance the functions, usability and aesthetics of existing products and services.
- **Business and Innovation** — provides an overview of the industry and new approaches to innovation.
- **Research Process** — students explore and challenge contemporary themes through theory and practice. The unit has a strong engagement with game theories (how games are made and what makes a good game), play, multimodality, artificial intelligence, and trans-media storytelling, user experience and computational design.
- **Concept and Prototyping** — students undertake a 15-week project to develop and build a prototype, test an emerging technology or generate a concept.
- **Major project** — ‘the final culmination of your investigations and is a substantial piece of self-managed work that embodies the integration of theory and practice, is underpinned by advanced practice-based methodologies and processes.’


Course Title: **MA/MSc Interactive Product Futures**  
Teaching Institution: Ravensbourne  
Duration: 1 year full time / 2 years part time

**Overview:** This course ‘explores academic theories as well as industry practice within interactive media, digital arts, entertainment and product design; and is a combination of two separate fields: product design and interactive media’. The primary focus is on ‘user-centred design processes and research[ing] and analys[ing]
“user interaction”. The course provides students with experience of developing software solutions to a given problem by issuing them short project briefs in which to design, implement, test and evaluate solutions in the form of an interactive product (both online and offline). This provides experience of producing creative works within different specialisations including rapid prototyping (3D printing), animation, game design, web design, installation art, projection mapping, creative coding, computation design and entertainment media.

Course Content/Structure

- Technology Issues – students ‘engage and explore emerging new technologies as well as skills in scripting and coding, first within a group, then as a cross-disciplinary, and finally in an individual project’.
- Business and Innovation – students ‘explore the generation of innovative new business models helping them to shape their emerging project concept’.
- Research Process – students ‘explore academic theoretical frameworks and research methodologies and their application within industry practice’.
- Concept and Prototyping – students ‘explore the dialogue between product and user, the function, usability and forms, flow and creativity and user experiences’.
- Major project


The strengths of both courses include:

- strong links with industry throughout all stages of the course from input to the curriculum, to provision of internships, and teaching staff who are either currently working within the industry, or have recent relevant industry experience.
- small cohorts (less than half a dozen).
- the mix of theory and practice included in the course content and the fact that student assessment is based upon live and relevant projects, which offers “added value” to the learning that takes place on the course.

A general programme specification for Ravensbourne’s postgraduate courses can be found here: [http://www.ravensbourne.ac.uk/media/52902/PG-Framework-Specification.pdf](http://www.ravensbourne.ac.uk/media/52902/PG-Framework-Specification.pdf)

4.2 Undergraduate courses

Course Title: **Digital Media Development BSc(Hons)**
School/Department: School of Computing, Engineering and Mathematics
Teaching Institution: University of Brighton
Duration: 3-year full-time; 4-year with placement year

**Brighton’s Digital/Interactive Media Cluster**
This course benefits from its unique proximity to Brighton’s digital cluster. Home to over 1,000 companies in the digital sector, Brighton is one of the UK’s leading centres of creative media technology and the council have recently invested £10 million in a state-of-the-art digital hub.
The average digital firm in the area is growing by more than 14% a year, while the sector in Brighton is experiencing jobs growth at more than 10 times the rate of the wider UK.

**Brighton Digital Festival** is a month-long celebration of digital culture and runs throughout September of every year. In 2013, the festival drew 41,000 people to 175 events that included coding workshops, motion capture performances and 3D printing installations.

**WiredSussex** are a locally based membership organisation for companies and individuals working in the digital sector. They offer internship services and a doorway to job opportunities across the city.

**Overview**

This course develops the skills required to develop web and mobile applications, with advanced instruction in technology, design and production. Students create a professional portfolio of work showing that you can integrate sound, video, image, text and animation to create rich and engaging digital user experiences.

While working towards this professionally accredited qualification, students benefit from guest lectures from industry professionals and have the opportunity to work on projects for real clients.

**Course Content/Structure**

Typical modules include:

**Year 1**
- Design for Digital Media (Adobe Creative Suite)
- Web Development (HTML, CSS, JavaScript)
- New Media (Android App Inventor, WordPress)
- Human–Computer Interaction
- Programming (Java)
- Databases
- Digital Technologies
- Professional Practice and Study Skills
- Personal portfolio development

**Year 2**
- 3D Graphics and Animation (3D Studio Max)
- Time-Based Media (Adobe Premiere Pro and After Effects)
- Interactive Multimedia Development (HTML5, CSS3, JQuery)
- Web Technologies (AJAX, JQuery, PHP)
- Website Design and Development
- Project Planning and Control
- Personal portfolio development

**Placement Year**

Students are encouraged to do a paid year working in industry before completing their degree. Our placement service provides support with preparation and securing a placement. Students studying this course
may find work in web and mobile agencies, digital marketing, or multimedia production. Current placement employers include:

- Cogapp (multimedia for museums and galleries)
- Site Visibility (digital marketing)
- Geonomics (location-based lottery games)
- Ten4 (web design agency)
- Absolute Radio

Year 3
- Mobile Application Development (Android, Java)
- 3D Dynamic Modelling
- Digital Post-production
- Internet Games Design and Development
- Digital Marketing
- Usability Evaluation
- Intellectual Property Law and IT
- Entrepreneurship

See: [https://www.brighton.ac.uk/courses/study/digital-media-development-bsc-hons.aspx](https://www.brighton.ac.uk/courses/study/digital-media-development-bsc-hons.aspx)

Course Title: **Digital Design BSc (with professional practice option)**
School/Department: School of Engineering and Design (includes some combined modules with BSc (Hons) Visual Effects and Motion Graphics).
Teaching Institution: Brunel University, London
Duration: 3-year full-time; 4-year thick-sandwich

**Overview:** According to Brunel’s website, this is a multi-disciplinary degree which ‘focuses on the intersection of the Arts and Sciences’. The course has a ‘strong practical component’ which aims to give students ‘the knowledge and practical and analytical skills to prepare them for employment in creative roles within the digital industry’. Its special features include having an IT budget of half a million pounds per year and a policy that its software resources are less than a year old. The university’s location close to industry is also cited as a special feature since it ‘enables extensive interaction with and within the digital creative community.’ The majority of staff have practical experience of working in the digital industry and methods of teaching include lectures, studio workshops, tutorials, and one-to-one supervision.
## Course Content/Structure

Typical modules include:

### Level 1

<table>
<thead>
<tr>
<th>Autumn Term</th>
<th>Spring Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creativity for Digital Media Design (all year)</td>
<td>Introduction to Video Production</td>
</tr>
<tr>
<td>Digital Photography</td>
<td>Digital Design Theory</td>
</tr>
<tr>
<td>Digital Graphics</td>
<td>Web Design and Development</td>
</tr>
<tr>
<td>Web Design</td>
<td>Interaction Design and Usability</td>
</tr>
<tr>
<td>Business for the Creative Industries</td>
<td>Programming for Digital Media 2</td>
</tr>
<tr>
<td>Programming for Digital Media 1</td>
<td></td>
</tr>
</tbody>
</table>

### Level 2

<table>
<thead>
<tr>
<th>Autumn Term</th>
<th>Spring Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Media Aesthetics 1</td>
<td>Applied Media Aesthetics 2</td>
</tr>
<tr>
<td>Marketing and Professional Development</td>
<td>Design Practice</td>
</tr>
<tr>
<td>3D Design</td>
<td>3D Animation</td>
</tr>
<tr>
<td>Experimental Digital Futures (all year)</td>
<td>Server–Side Web Development</td>
</tr>
<tr>
<td>Data Modelling</td>
<td>Mobile Development</td>
</tr>
<tr>
<td>Design for Mobile</td>
<td></td>
</tr>
</tbody>
</table>

### Level 3

- Working in the Creative Industries (compulsory)
- Major Project (compulsory)
- Digital Experiences (option)
- Sound Production for Mixed Media (option)
- e-Business (option)
- Graphics (option)
Interactive Media Skills Gaps

- Rigging & Motion Capture (option)
- 3D Stereoscopic Production (option)
- Effects Animation (option)

See: [http://www.brunel.ac.uk/courses/undergraduate/digital-design-bsc](http://www.brunel.ac.uk/courses/undergraduate/digital-design-bsc)

The strengths of the course include:

- the balance between design, technical and business for the digital industries, with all three elements embedded from Year One;
- programming covers both front-end and server side design. Teaching here is supported by staff with strong computer science backgrounds and is kept fresh and focused on current industry needs – e.g. Mobile first, responsive design, HTML5 etc;
- some modules specifically focus on developing highly innovative/future-tech based projects with business models taken into account alongside design and technology development issues;
- the course is delivered primarily through the use of briefs and student responses to briefs, with thorough consideration of all stages of the creative process, including reflection and analysis of both rejected ideas and final productions;
- work placements are an assessed part of the four year course, with good take-up from students and some high-profile industry placements which often lead to full-time employment.

4.3 Apprenticeships

Title: Level 4 Apprenticeship – Interactive Design Development

Overview: As stated in the framework, this higher apprenticeship combines ‘interactive media product design and development, IT and Creative industry business skills; to create a tailored package for apprentices in higher level digital roles’. It aims to provide a progression route from the Advanced Apprenticeship in Creative and Digital Media and to be a direct entry route into higher level creative technology roles.

Content/Structure: The qualification combines competence and knowledge credits. The balance between these will vary from learner to learner, depending on the units selected by each apprentice. Assessment of the knowledge may take the form of ‘group technical activity in the classroom, specific technical workshop sessions and on-line study’. For competence assessment it may include ‘observation through planned assessment visits in the workplace, 1-1 on site delivery and in the form of a portfolio of products under development.’ The units, as outlined in the Apprenticeship Framework, are:

<table>
<thead>
<tr>
<th>Mandatory Group A - 3 units to be taken (16 credits)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Awareness of employment in the creative media sector L/600/9037;</td>
</tr>
<tr>
<td>Awareness of health and safety in the creative media sector H/600/8511;</td>
</tr>
<tr>
<td>Work in interactive media K/504/6294</td>
</tr>
</tbody>
</table>
## Optional Group B - a minimum of 10 units (74 credits) must be taken from this group

<table>
<thead>
<tr>
<th>Skill</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design user interfaces for interactive media products</td>
</tr>
<tr>
<td>Plan content for interactive media products</td>
</tr>
<tr>
<td>Write and edit copy for interactive media products</td>
</tr>
<tr>
<td>Obtain assets for use in interactive media products</td>
</tr>
<tr>
<td>Prepare assets for use in interactive media products</td>
</tr>
<tr>
<td>Create animated assets for interactive media products</td>
</tr>
<tr>
<td>Create sound effects for interactive media products</td>
</tr>
<tr>
<td>Use authoring tools to create interactive media products</td>
</tr>
<tr>
<td>Prepare and use mark up in interactive media products</td>
</tr>
<tr>
<td>Optimise webpages for search engines</td>
</tr>
<tr>
<td>Use style sheets in interactive media products</td>
</tr>
<tr>
<td>Use scripting languages in interactive media products</td>
</tr>
<tr>
<td>Use programming languages in interactive media products</td>
</tr>
<tr>
<td>Conduct user testing of interactive media products</td>
</tr>
<tr>
<td>Manage the use of data in interactive media products</td>
</tr>
<tr>
<td>Manage on-line engagement</td>
</tr>
<tr>
<td>Create narrative scripts for interactive media</td>
</tr>
<tr>
<td>Communicating using digital marketing/sales channels</td>
</tr>
<tr>
<td>Planning platform or channel use</td>
</tr>
<tr>
<td>Designing and developing a website</td>
</tr>
<tr>
<td>Designing and developing object-orientated computer programmes</td>
</tr>
<tr>
<td>Using digital channels, platforms and social networks to deliver marketing communications - advertising</td>
</tr>
</tbody>
</table>
**Optional Group B - a minimum of 10 units (74 credits) must be taken from this group**

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>Develop and extend critical and creative thinking skills</td>
</tr>
<tr>
<td>Strategic marketing planning skills within the design and creative industries</td>
</tr>
<tr>
<td>Business planning and financial projections in the design and creative industries</td>
</tr>
<tr>
<td>Design development, creativity and business development</td>
</tr>
<tr>
<td>Leadership and people management in the design and creative industries</td>
</tr>
<tr>
<td>Intellectual property management in the design and creative industries</td>
</tr>
<tr>
<td>Design project management for creative practitioners</td>
</tr>
<tr>
<td>Doing business globally</td>
</tr>
<tr>
<td>Finance for designers and creatives</td>
</tr>
</tbody>
</table>

**Example:** **Level 4 Apprenticeship in Creative and Digital Media (degree level qualification)**

Institution: Hackney Community College

**Overview:** The apprenticeship is one of Hackney Community College's 'Tech City Apprenticeship[s]' which have been developed to take advantage of East London's tech cluster. The college has worked closely with tech companies in the area including Google, Yammer and Intel to create IT and digitally focused apprenticeships. According to an example job specification included on the Tech City Apprenticeships website it 'has been designed by industry leaders and combines programming skills with a creative touch to develop a truly interactive user experience.'

Detailed aims and objectives of the apprenticeship, job roles and further details of content are outlined in the framework see: [http://www.afo.sscalliance.org/frameworks-library/index.cfm?id=FR02291](http://www.afo.sscalliance.org/frameworks-library/index.cfm?id=FR02291)


For further details about Tech City Apprenticeships see: [http://www.techcityapprenticeships.com/apprentice/](http://www.techcityapprenticeships.com/apprentice/)

**Title:** **Level 3 Apprenticeship - Creative and Digital Media (England)**

**Overview:** As stated in the framework, this advanced apprenticeship is aimed at those looking to develop ‘a new set of skills needed by Creative Industries employers: a fusion of creativity, technology and business.' Learners develop skills in a range of areas including production and editing, animation, camerawork, radio and photo imaging.
**Content/Structure:** The qualification aims ‘to develop an understanding of the end to end production cycle, in relation to:

- Different platforms e.g. audio, visual, interactive and emerging technologies
- Different genres e.g. entertainment, drama, news, sport, children’s, features
- Different formats e.g. live, studio, online, mobile technology

Apprentices complete one of the following competence qualifications (these contain the same units but have different awarding bodies):

- C1 - Level 3 Diploma in Creative and Digital Media Competence (Awarding organisation: OCR)
- C2 - Level 3 Diploma in Creative and Digital Media (Awarding organisation: Pearson Edexcel)
- C3 - Level 3 Diploma in Creative and Digital Media (QCF) (Awarding organisation: AIM Awards)

And either one of the following four knowledge qualifications:

- K1 - Level 3 Certificate for Creative iMedia (Awarding Organisation: OCR)
- K2 - BTEC Level 3 Certificate in Creative and Digital Media (Awarding Organisation: Pearson)
- K3 - City and Guilds Level 3 Certificate in Media Techniques (QCF) (Awarding Organisation: City & Guilds)
- K4 - Certificate in Creative and Digital Media (QCF) (Awarding Organisation: AIM Awards)

Apprentices must also complete transferable skills qualifications in English, Maths and ITC.

Details of these qualifications along with information about the aims and objectives of the apprenticeship, job roles and further details of content are outlined in the framework see: [http://www.afo.sscalliance.org/frameworks-library/index.cfm?id=FR02891](http://www.afo.sscalliance.org/frameworks-library/index.cfm?id=FR02891)

### 5. KEY RECOMMENDATIONS

**Overall**

- Top quality education provision and interactive media/digital clusters or hubs act as a catalyst for each other, creating a skills cycle whereby industry informed education provides that industry with individuals of the caliber they require e.g. Brighton University or Hackney Community College.
- Existing clusters of interactive media course provision in the Honeycomb eligible areas must work to nurture networks and relationships with local interactive media companies.
- As can be seen from examples of best practice provision internships assist companies to work with graduates to develop their experience. However this has advantages and disadvantages for companies and is not an option for all businesses. For internships to go some way to increasing the experience levels of tech graduates the number of opportunities would need to increase as well as financial support to companies providing internships.
Interactive Media Skills Gaps

• Networks such as Wired Sussex have proved invaluable in linking educational provision with industry. Attracting similar initiatives to the eligible areas could facilitate a more supportive environment to start-up growth.

• Freelancers are important to the sector (22% of the workforce in NI and 16% in Scotland) (Creative Skillset 2012). The Honeycomb survey of the interactive media sector in the Republic of Ireland border counties found that over half employed freelancers. This highlights the importance of strong networks and access to freelance skills to facilitate development and growth of start-up companies.

Republic of Ireland border counties

• Potential interactive media/digital clusters already exist around the Letterkenny Institute of Technology and the Dundalk Institute of Technology. Development of links and networks with industry in these areas could lead to a significant interactive media/digital cluster.

• Estimates show there are around 2,800 undergraduate students on interactive media related courses in the Republic of Ireland. There are also around 5,500 graduates of higher education (undergraduate and postgraduate) relevant to interactive media. This suggests that there is a potential pool of talent within easy reach of a potential cluster or hub.

Northern Ireland (Excluding Belfast and Greater Belfast)

• Over half (55%) of the courses identified in the Northern Ireland eligible area were concentrated in county Londonderry. This would seem the obvious choice to further develop an interactive media/digital cluster through increased links with industry.

• Estimates show there are around 2,600 students on interactive media related courses in Northern Ireland. This suggests that there is a potential pool of talent within easy reach of a potential cluster or hub.

Western Seaboard of Scotland

• Course provision within this area tended to be concentrated within the Dumfries and Galloway and Ayrshire areas. This would seem the obvious choice to further develop an interactive media/digital cluster through increased links with industry.

• Estimates show there are over 9,000 students on interactive media related courses in Scotland. This suggests that there is a potential pool of talent within relatively easy reach of a potential cluster or hub.
REFERENCES


Creative Skillset (2011a), Sector Skills Assessment for the Creative Media Industries in Northern Ireland: http://creativeskillset.org/assets/0000/6025/Sector_Skills_Assessment_for_the_Creative_Media_Industries_in_Northern_Ireland_2011.pdf


Honeycomb – Creative Works (2015), Smart Moves: Developing the Interactive Media Sector. Available at: http://thehoneycomb.net/research/reports/sector-development-reports


APPENDIX 1: THE HONEYCOMB CREATIVE WORKS TEAM

Staff and management committee
David Brown, Scottish Programme Coordinator, Creative Skillset
Dr Paul Beaney, Project Director, Ulster University
Deirbhile Doherty, Finance Assistant, Ulster University
Professor Sarah Edge, Skills Director, Ulster University
Kevin Fearon, Networks of Scale Coordinator, Dundalk Institute of Technology
Professor Nick Higgins, Research Associate, University of West Scotland
Ian Kennedy, Management Committee, Creative Skillset Northern Ireland
Camilla Long, Skills Coordinator, Ulster University
Irene McCausland, Management Committee, Dundalk Institute of Technology
Fiona McElroy, Programme Manager, Ulster University
Stephen Michael, Web Developer, Ulster University
Dr Colm Murphy, Intelligence Director, Ulster University
Dr Aisling Murtagh, Research Associate, Ulster University
Dr Douglas Nanka-Bruce, Research Associate, Dundalk Institute of Technology

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Maria Prince, Programme Administrator, Ulster University
Alasdair Smith, Management Committee, Creative Skillset Scotland
Agnieszka Walsh, Project Administrator, Dundalk Institute of Technology
Dan Wilks, Research Associate, Creative Skillset London

Lead partner
Ulster University

Partners
Creative Skillset
Dundalk Institute of Technology
University of the West of Scotland

Delivery partners
Creative Scotland
Letterkenny Institute of Technology
MG Alba
Regional Development Centre, Dundalk Institute of Technology
ScreenHI
The Nerve Centre
About Honeycomb

The Honeycomb – Creative Works programme is a collaborative project led by University of Ulster, in partnership with Dundalk Institute of Technology, Creative Skillset and the University of the West of Scotland.

Honeycomb is part-financed by the European Union’s European Regional Development Fund through the INTERREG IVA Cross-border Programme managed by the Special EU Programmes Body.