

The Computer Games and Creative Industry Sector: Growth Prospects and Job Creation for the East of England and UK

By Tim French

Introduction

The East of England's economy has been successful over the past 20 years and this has contributed to its attractiveness and population growth. However, continued economic success is not by any means guaranteed. Given the recent global "credit crunch" and consequent world-wide economic re-alignment, the East of England and wider UK economy is looking towards the Creative Industry sector as a whole (ICT, Media and Computer Games) to deliver sustainable growth (East of England Development Agency, 2008). Globalisation is rapidly reshaping the economy of the UK. This presents both opportunities and challenges. The creative industry sector including the computer games industry lies at the forefront of this challenge and opportunity. Increasing globalisation within the computer games industry remains a key challenge: recently the UK has slipped to fourth largest manufacturer, behind Canada, in the world in this sector and the Far East is gaining momentum. Thus, whilst growth prospects remain excellent - there is certainly no room for complacency. Continuous innovation and creativity are needed together with inward investment, if the UK's competitive position is to be maintained.

Significance and Future Prospects

The computer games industry has one of the most even geographical distributions of employment of all the UK's creative industries, with games development taking place right across the UK (see http://www.skillset.org/interactive/overview/article_4392_1.asp).

The Skillset Employment Census of 2006 states that around 9,000 people are directly employed in the computer games industry in the UK, with a further 22,500 people indirectly employed by the sector. Around 350,000 ICT specialists are based in the East of England region. Half of the UK's studios and media production facilities (First Move East, 2009) are based in the region. According to a recent fact-sheet published by the UK Department of Trade and Industry (<http://www.ukinvest.gov.uk>) the East of England is home to around 13 "economically significant" computer games companies. There is a high concentration of games publishers in London: the city is home to another 30+ games companies of economic significance.

According to a recent computer games sector report available in the public domain (Computer Sector Report, 2008), the year 2007 was a particularly successful year for the "gaming" industry in the UK. Three new console platforms were established, and the launch of huge blockbuster games such as "Halo 3", which made \$170 million sales in just one day, are testament to this success. It would appear that more and more people are playing computer games across Europe than ever before. Increasing consumer demand is leading to a significant expansion of the computer games industry. With ever more affordable game development tools, the barrier for new entrants is getting lower by the day. Hence micro companies, SMEs, as well as larger companies who have staff with relevant graduate level skills, are well placed to benefit from this expansion at a time of more general economic uncertainty.

Who are the "Gamers"?

Gamers and the gaming community appear to be continually evolving and expanding. The profile of a typical gamer doesn't always match pre-conceived stereotypes either, as can be seen from some recent data released on the online games forum askaboutgames.com:

- "Over 25 million dedicated gaming devices have been sold in the UK (not including PCs) since 1995 – this is enough for at least one device in every household."
- "In the last 10 years, more than 335 million computer and video games have been bought in the UK – that's five games for every person and at least a dozen games for every household!"
- "Games are played across sexes, ages, and classes. Their spread is now almost universal. 38.2% of the UK population is an active computer gamer. 51.2% of British men and 25.1% of British women aged 10-35 play games regularly."
- "On average, gamers play for 12.6 hours per week. To put that into perspective, it is estimated that the average person will watch three hours of television every night".
- "UK female players spend more on games than any other demographic in Western Europe (except UK males)".

[<http://www.askaboutgames.com/?c=/pages/factsFigures.jsp>]

What's the Role of Higher Education?

The role of Higher Education is going to be vital to help sustain the continued growth of the games industry and to maintain the UK's competitive position relative to world markets in the creative industry sector as a whole. The South East region is fortunate in that within the so-called "i10" twelve member university consortium based in the region (see Figure 1) individual members comprise a rich mix of world class teaching and research, industrial knowledge transfer and innovative, vocational universities that are able to respond rapidly to the needs of the "gaming" community.



Figure 1: Brand identities of the i10 Consortium

More specifically, within the East of England region the University of East Anglia and the University of Bedfordshire both offer specialist undergraduate BSc (Hons.) degrees in computer games. More general university links with both the gaming and creative industries are strong (i10, 2007) as are the prospects for future growth in both student numbers and employment opportunities within the East of England region and beyond. The key driver behind this growth is the harnessing of creativity and innovation for competitive advantage within the context of a skilled graduate level workforce (since 2000, over 90% of new entrants to the computer games industry hold graduate or postgraduate level qualifications).

There is further scope for expanding existing partnerships between university and private sector providers in the context of the creative industries as a whole and within "gaming" in particular. Various forms of expanded university-mediated education and training will undoubtedly be needed to support the future expansion of the gaming industry: full-time undergraduate level degree programmes, short-courses and on-line Continuing Professional Development (CPD) style packages are amongst the many possibilities.

The university sector needs to "step up to the challenge" if opportunities are to be maximised for synergy between the gaming industry and the university sector. Industry-led accreditation of university computer games courses is one emergent trend that is set to expand as the number of courses grows. Indeed, as the recent Cox Report (2008) suggests the future of the UK economy as a whole may well rest with the success or otherwise of marshalling creativity for competitive advantage:

The premium that will be placed on creativity in the 21st century should give the UK a flying start in the race for competitive edge. The question is whether business will rise to the challenge of exploiting the creative capabilities at its disposal. The outcome won't affect just business itself. It will affect us all.

[Cox Review, Executive Summary, 2008, p. 5]

For the games industry the challenge is to how best to harness creativity so as to promote a significant and sustainable expansion of the present workforce of some 9,000+ direct employees in the quest to gain market share within a sector with growing demand. To meet this challenge closer links with the HE sector will be crucial (Skills Set HE Report, 2005):

The importance of Higher Education to the sector cannot be underestimated, employers report that they look to degrees (undergraduate at least - many prefer post graduate) as a benchmark for recruitment, with relevant subjects including Games Programming, Games Art, [Computer] Animation, Computer Science...

Employment Prospects in the Gaming Industry

For university graduates current pay and prospects continue to remain positive. According to a recent survey within the gaming sector average pay for a developer is now £30,442 (The Computer Games Developer Survey 2009, <http://www.developmag.com>). However, for the gaming industry to fully exploit the creative capabilities of its young workforce (over 80% are under 35 years of age), strong partnerships with the university sector will be essential.

- Universities need continuous industry inputs so as to optimally align their course content to ever-evolving gaming industry needs;
- Employers are generally seeking high calibre graduate level employees with the necessary technical focus and also the "soft" skills needed to play effective management / supervisory roles within the industry;
- With 80+ specialist computer games courses available at BSc and MSc level within the UK, it seems that the whole sector remains both vibrant and expanding – and may well see further expansion, despite the "credit crunch";
- Industry accreditation of courses is a growth trend, as are web-based courses and professional in-service courses.

Job roles in the industry comprise a rich mix of development roles and creative roles, as well as management and marketing functions. An exemplar computer games developer role is given in Figure 2 (reproduced in abbreviated form).

Games developer: Job description and activities

Games developers are involved in the creation and production of computer games, handheld games, console games, arcade games, 'Flash' games for internet use and games for mobile phones. Design, programming, art and animation are the work of games development studios in this multibillion-pound industry. Games development involves many stages, including creating and designing a game's look and how it plays, animating characters and objects, creating sound, programming, testing and producing. Responsibilities within the games developer role include quality assurance tester, programmer, producer, project manager, animator and graphic artist, designer, sound technician and artificial intelligence specialist.

Typical activities (one or more of the following)

- quality testing games to find problems or 'bugs' and precisely recording where the problem was discovered;
- developing designs and/or initial concept designs for games, which may include deciding how the game plays;
- generating game scripts and storyboards;
- creating the visual aspects of the game at the concept stage;
- using 2D or 3D modelling and animation software at the production stage;
- programming the game using programming languages such as C++

http://www.prospects.ac.uk/p/types_of_job/games_developer_job_description.jsp

There is a generally acknowledged shortage in the UK computer games industry of new graduate applicants who are able to offer credible programming skills (in C++/C#) and who also share the necessary drive and passion for gaming. For those who possess such skills and personal qualities the future could not be brighter.

Gaining the Skills to get into the Industry

There are a number of ways to gain the knowledge and skills to gain entry into the computer games industry. There have been established a number of highly successful computer games design and development courses, delivered at higher education institutes around the country. Each has its own distinctive aspects and interpretation of the skills required. The BSc Computer Games Development programme at the University of Bedfordshire aims to provide students with a solid understanding of the theory and principles that underlie computer games development, along with practical skills to ensure they are ready to serve the needs of industry. To ensure that the curriculum is relevant to the needs of the industry, the University of Bedfordshire is pleased to work in collaboration with Train2Game. Train2Game have developed courses that enable successful candidates to meet the needs of industry in computer games development and computer games design. The materials for the course have been created by industrial practitioners and use tools and techniques that these practitioners have developed and been using for a long period of time. The courses have been endorsed by TIGA, the National Trade Association for the computer games industry. This endorsement is a testament to the industrial relevance of the courses. The University of Bedfordshire will be using the materials, tools and techniques of these courses in its BSc Computer Games Development programme.

The Train2Game courses are available as standalone courses and provide an excellent platform for people to gain entry into the sector that do not wish to undertake a complete BSc programme. Undergraduate degree programmes include a number of elements that are not subject-specific, such as personal development planning and transferable skills; the programmes will normally take 3 years full-time to complete, and considerably more part-time. This may not be appealing to some potential games designers or developers who wish to undertake very focused, subject-specific training and a course that may be completed in a shorter time-frame. The Train2Game courses provide an excellent industry-recognised alternative to an undergraduate programme.

Conclusion

The East of England is well placed to play a key role in the expansion of the "gaming" sector given the strong existing links that already exist between the creative industries and the vocational universities in the region. Viable, economically significant computer games clusters already exist in the South East and London regions. These clusters represent approximately 30% of the UK total workforce. These links are set to expand and deepen as demand for tailored computer games courses and graduates increase and as gaming becomes more and more a mainstream activity in our lives. The gaming and creative sectors' value in promoting jobs growth in a time of general recession cannot be under-estimated. To maximise that growth, industry needs to work more closely with HE and other providers. As the industry is a global one, continuous innovation is needed. The young workforce should, with suitable support, be ideally placed to benefit from this growth. To take advantage of these opportunities and gain employment in the sector, there are a number of options available including pursuing a university degree or undertaking industry-recognised courses such as those of Train2Game.

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ABOUT THE WRITER:

Mr Tim French obtained a BA from the Open University whilst working in industry, later completing a Master's degree (MA) in Computer Studies in Musicology at Nottingham University. He is a Fellow of the College of Preceptors (FCollP) and a Member of the British Computing Society, (MBCS) and a member of the BCS specialist interest groups in HCI (Human Computer Interaction) and Requirements Engineering.

He has in the past undertaken extensive freelance industrial consultancy activities to businesses of all sizes ranging from SMEs to large PLCs and has most recently has engaged in part-time PhD studies in Computer Semiotics (Trust aspects) at Reading University.

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