The computer games industry: Women's experiences of work role in a male dominated environment

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Women in Engineering, Science and Technology:
Education and Career Challenges

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Chapter 7
The Computer Games Industry:
Women's Experiences of Work Role in a Male Dominated Environment

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ABSTRACT

This chapter focuses on the current position and experiences of women working within the computer games industry, the Information and Communication Technology (ICT) sector and the wider context of the Science, Engineering and Technology industry (SET). Global data collected as part of a larger quantitative study on women who are currently working in the male dominated computer games industry is reviewed, in relation to the long hour's culture associated with the sector. In addition, the lack of females, especially females with families in the gaming industry, skills shortages, work life balance and flexible working will be discussed in the games industry context. The research discussed will be related to the question of attracting and retaining women, in the games development workforce of the future. The issues discussed will be of relevance to employers, professional bodies, policy makers and researchers of the games industry and the wider ICT and SET industries. Recommendations from the findings and future research directions are provided.

INTRODUCTION

There is a need to recruit and retain more women as women are leaving the ICT industry in large numbers (Burns et al, 2007). This is despite the adoption of equal opportunities policies and various campaigns worldwide to attract women into ICT. Information, communication and technology (ICT) occupations represents a classic example of occupational gendered segregation and includes both vertical and horizontal segregation. The sector has been active in increasing women's participation through a number of government strategies with the aim of increasing the appeal and the image of the sector to young females. One initiative in the United Kingdom (UK) is a government scheme '*Computer Club for Girls'* that aims to combat the image problem of computers by emphasizing the

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fun aspect. The aim of this is to maintain interest, in order that they may begin to consider a career within the industry. The games industry itself has also been active in recent years, in promoting the appeal and accessibility of a career in games to females. In 2009, 'Gamasutra' an online publication named the top 20 game writers (Ruberg, 2009), two women made this list (at number 15 and 19). Interestingly, one of the women Susan O'Connor was reported to be "*recognized as one of the most original and influential game writers currently working in the industry*." Yet this woman appeared at number 15 in the list!

At a recent UK conference (2008 Women in Games), a number of these recent initiatives were discussed. Recent initiatives since 2007 have included:

- Microsoft 'Digigirls' workshop - 200 female participants aged 12-15 with focus on ICT and games.
- The University of Teesside, UK 'Girls and gadgets' conference - Females aged 13-16 with focus on the games industry and technology.
- University of Denver, USA 'P4Games' summer camp - Females with focus on game development

The widening women's work in ICT (Valenduc et al, 2004) project conducted in 2002-2004, in seven European countries (Austria, Belgium, France, Italy, Ireland, Portugal and the UK) found a number of factors contributing to the lack of women's participation in ICT. Findings from interviews and case studies with women working in ICT professions indicated that issues included the long hour's culture associated with the sector, the lack of females, especially females with families. In addition, there was a perception of the industry as masculine, 'geeky' and unsocial. Many of these factors have also been associated with the computer games industry as reasons as to why women are a minority within the industry (Haines, 2004, IDGA, 2004). The aim of the current chapter is to discuss these issues further and include findings from a larger qualitative study of over 450 women currently working internationally in the games industry (Prescott, forthcoming). The chapter aims to provide a brief overview of women's position within the wider ICT and SET industries, an overview of the games industries within the current economic climate and look at the position of women within the industries current workforce. The chapter will also discuss issues of work life balance; long hours and flexible working with the aim of providing the industry with an increased understanding and knowledge of how it may attract and retain a more diverse workforce in the future. The chapter contributes to the paucity of literature surrounding women working in the games industry in the UK and internationally as well as to provide a deeper understanding of women working under the umbrella of the ICT sector.

BACKGROUND

Women Working in the Science Engineering and Technology Industries (SET)

Data from the UK, 2007 Labour Force Survey indicates that women comprise almost a fifth of all SET workers (19% women and 81% men), the percentage of total women in SET occupations is the same as in 2002. In terms of proportional growth, overall, the number of SET women workers has increased by 12%, between 2002 and 2007 (representing 59,017 additional women in SET occupations). However, men in SET occupations also increased in the same period by 8.5% (representing 199,000 additional men in 2007). Women SET managers have increased by 2% since 2002 (14% in 2007).

In 2007 males represented; 86% of SET managers, 61% of science professionals, 95% engineer-

ing professionals, 86% of ICT professionals, 81% of building professionals, 78% of science and engineering technicians and 77% of IT service delivery occupations. The only SET occupation were women represent a higher percentage is research professionals with 51% and they are close to parity with their male counterparts in the teaching professions at 49%.

In 2007 (SET, 2009) across the EU countries, Switzerland had the highest percentage of female SET managers (43%) with 12 out of the country's 28 SET managers being female. The country with the highest percentage of female science professionals was Bulgaria (53%) and Cyprus is the country with the highest percentage of female ICT professionals (25%) however both countries have low a number of employees within the industry.

Data from UCAS (2007) shows that in 2007, for maths and computer science almost a quarter (24%) of degree applicants were women (21% in 1996) and that proportionally overall degree acceptances were 22% (23% in 1996). Women technology applicants and acceptances in the same period were 28%. Comparisons cannot be made between 1996 and 2007 for the technologies, as data categorization changed within the period.

Women's under representation in SET occupations is not only evident in the United Kingdom but also exists in most Western economies. In the European Union, Valenduc et al (2004) found that women represented 17% of all information technology professionals and 12% of engineers. Austria had the lowest representation of women IT professionals (14%) followed closely by Belgium and the UK (15% each). The highest representation was found in Ireland with almost one third (29%) female representation. The UK and Belgium had low representation of female engineers, at only 7% and Austria the highest level at 25%.

Figures from the USA are similar to those of the UK and Europe. This suggests a disparity exists globally. For example, in the life sciences women represent 45% of medical scientists, 47% of biological scientists, 34% of chemists and 22% of environmental scientists. For engineering occupations, women represent 17% of chemical engineers, 12% of civil engineers, 16% of computer hardware engineers and 8% of electrical engineers. For computer and math's occupations women represent just over a quarter (27%) of employees. (Labor Force statistics, CPS, 2007).

The under representation of women in the IT workforce is a worldwide problem. However, it may be a more predominant problem in Western countries such as the UK, USA, Canada, Australia and New Zealand. Research by Trauth (2002) and von Hellens and Nielsen (2001) has found that women from non western countries such as India and China have more positive attitudes towards computers and technology than their western counterparts. This appears to be particularly the case in India, where culturally families generally expect children to be successful in education. Boys and girls in this country are encouraged to strive for a career in either medicine or engineering (Adya and Kaiser, 2005). This cultural bias, may in part explain variations in the representation of women IT professionals and engineers in country comparisons.

The computer games industry is a relatively new industry of approximately three decades. The following two sections would like to focus more specifically on the games industry, in particular, looking at the current economic climate of the industry and women's position within the industries workforce.

The Computer Games Industries Current Climate

The games industry is one of the fastest growing sectors of the 21st century (Krotoski, 2004). More digital games are sold in the US and UK than books (Bryce and Rutter, 2001). In 2004, the industries worldwide worth stood at 20bln Euros for software and hardware (ISFE, 2004, see Krotoski, 2004). The estimated turnover of the UK computer games industry in 2008 was £625 million, having

Table 1. Game professionals UK salary by role and level, as of the 22nd January 2008

	Development Programmer	Artist	Designer	Producer
Junior	£18-25k	£18-21k	£18-21k	£18-27k
Middle	£20-35K	£20-27k	£20-28k	£28-40k
Senior	£35-50k	£27-35k	£25-35k	£35-60k
Lead	£40-60k	£38-55k	£38-55k	£45-80k

MCV (2008)

a direct contribution to UK GDP (Gross Domestic Product) of approximately £400 million (Oxford Economics, 2008). The UK industry supports an estimated 28,000 jobs, directly, indirectly and induced (Oxford Economics, 2008).

According to research and analysis of the US economy by IBISWorld, in 2008 the games industry (including development, production and retailing) was a $40 billion business. The Vancouver Film School (2009) suggests that in 2007 the worldwide games industries worth stood at 41.9 billion USD. According to the IBISWorld report, the industry is not expected to be hit by the current recession and it is expected to grow by 9.5% in 2009. The report also projects a yearly forecast thereafter of 10%, which is estimated to reach $63.2 billion by 2013 (IBISIWorld, 2008). A recent report by the Vancouver film school (VFS) in 2009, suggests the games industry is strong enough to survive the recession due to the growth in the industries software sales globally. The report suggests that in 2008 across the globe the games industry revenue figures in billions USD were; USA 21.3, Canada 2, Europe 17.9, Korea 1.7, China 7.9, Japan 6.3, Latin America 1 and India 0.2.

However findings in the UK may not be so optimistic. According to the Oxford Economics report (2008) despite the industries 10% per annum growth since 2004, the industries decline in the UK is a possibility. One of the major reasons the report suggests for this possible decline is due to the expansion of the industry in other regions such as Canada, China and Korea. The report goes on to suggest that the UK 's games development industry could be £350 million lower by the year 2013, with a loss of 10,000 jobs supported both directly and indirectly by the games industry.

According to the Oxford Economics report (2008) games development is part of the UK's 'knowledge industry' (p7). The high skills of the industries developers is reflected in the above average earnings of those employed in the industry, which the report suggests to be £30k per annum, compared to the UK average of £25k per annum. There is also evidence that a gender pay gap exists within the sector, in that women earn on average £7,126 per year less than men (Krotoski, 2004) and in America, according to IGDA (2004) women earn an average $9000 less a year than male counterparts.

In addition, research by Krotoski (2004) noted that less than half a percent of women in the UK games industry were in lead, director or management positions, whilst 1.2% of men were in such roles. Research by Haines (2004) found that almost a quarter (23%) of senior positions, within twenty UK games companies were filled by women. However, these were more often in managerial and marketing roles, rather than direct games development roles.

Average UK earnings in 2008 for games professionals ranged from 18k to 80k (see Table 1). Furthermore, in Canada according to the VFS (2009) report, game designers and artists earn $25,000 more than average Canadian salaries. The report went on to state that in 2007, salaries

for game programmers and producers were double average earnings in Canada.

However, recent research by an online computer games magazine; reported very different findings, in that on average UK women in the games industry earn £2000 more than their male counterparts (MCV, 2009). The survey was based on 528 UK games industry professionals, from all sectors, including retail, publishing, HR, marketing and development. According to the MCV survey, women within the games industry were likely to be working in publishing, marketing, PR, retail and distribution services. MCV stated that only 6.9% of developmental roles were filled by women. This may explain the variation with other research.

A number of web 'blog' responses have been posted online in response to MCV's publication of salaries within the industry, a number of which were implying that the salary figures are untrue. It is interesting to note the response of a UK game developer and CEO, to a graduate who wrote a blog complaining about their junior role salary:

I'm the CEO of a UK developer. Starting salaries are as they are because it remains an attractive industry to join. Supply and demand. I'd set higher salaries if the right candidates weren't coming through.

Such statements reinforces the view point that the industry is an attractive or desirable industry to work in and therefore those that are involved in the developmental side of games are in it for the 'love of games', or a 'passion of games' as Consalvo (2008) refers to it, rather than purely for the money. A viewpoint the industry should take into account when looking at attracting and retaining a more diverse workforce.

Another interesting response from a different standpoint is the positive element of the research in highlighting salaries as opposed to keeping them secret:

Well done to MCV for doing this research, and making this data public. Developers in the UK are paid less than in the US, and there is a culture of 'salary secrecy' here that can undermine trust. We need to be more open about salaries - greater visibility.

The wider ICT industry, within the UK has been criticized for a gender pay gap (Tattersall, Keogh and Richardson, 2007), with one of the reasons put forward for this pay gap, due to what has been termed 'salary secrets'. An online blog also wrote of the industry having a culture of 'secret salaries'. Such practices are not equitable and do not assist in ensuring equity in the industry.

Furthermore, other research supports this viewpoint, for example the Directing Equality of Pay (DEPICT) in ICT (Keogh, Tattersall and Richardson, 2007) project ran from January 2005 to December 2006. The project was commissioned to explore the under representation of women in ICT, via the intended and unintended barriers within UK ICT pay systems. According to the DEPICT research, women in ICT earned 18% less than their male counterparts. The research found that due to the common practice of negotiated pay, bonuses and career advancement within ICT organizations, women were disadvantaged within the sector. Disadvantage was, in part attributed to women generally lacking the confidence and skills for negotiation. Keogh, Tattersall and Richardson (2007) went on to suggest a number of recommendations to assist in eradicating the pay gap, within the ICT sector. Recommendations focused on transparent pay systems, to eliminate 'salary secrets'. Promoting work life balance, to eradicate the 'long-hours' culture and encourage flexible working. Ensure transparent fair appraisals and remove salary negotiation. Value diversity, skills and potential and promote formal recruitment practices.

Women Working in the Computer Games Industry

In the UK women represent only 12% of the computer games industry workforce. This is a 4% increase from 2005 (Skillset, 2006). Similar percentages have found to exist in other countries, such as the USA, Canada and Australia (IGDA, 2005). In Canada recent figures suggest that women make up 20% of game industries workforce (VFS, 2009). An increase of 10% from 2007 and a 17% increase from 2004. The IGDA report found that the functions of writing, marketing/PR/sales and production have relatively healthy representation of females. However, male workers heavily dominate the majority of the core content creation roles. This supports earlier research conducted in the North West of England by Haines (2004), who found that the majority of women (73%) in the games industry work in managerial, administrative, marketing and PR roles. Haines research found that only 2% of programmers were female, 3% worked in audio, 5% were game designers, 8% production staff and 9% were artists. Women within the industry have little role in the content, interaction styles, character representation and the reward systems involved in games. This is crucial as it effects not only what is created, but how games are perceived by players (Flanagan, 2005).

Speaking at the 2007 Skillset Skills Week, Matthew Jeffery, Head of European Recruitment at Electronic Arts, noted that skills shortages were becoming more common in the gaming industry and measures had to be used to bring in 'more new talent'.

Games companies need to broaden out their recruiting scope and attract talent from other new industries and seduce more diverse groups into game teams, particularly women and ethnic minorities.

There have been a number of reasons suggested as to why there are so few women within the games industry and more specifically within a core creation role within the industry. For example, Fullerton, Fron, Pearce and Morie (2007) refer to the 'virtuous cycle' which is '*Making games that appeal to women and girls attracts more women to work on games, resulting in the creation of more games that appeal to women and girls*' (p141). Fulerton et al (2007) found that game design teams with more women in key design and production roles have produced products women enjoy. For example, the 'Sims' game is estimated to have a player base of approximately 50% females. The Sims development team has more women than average than other teams at Electronic Arts (EA) (Fullerton, Fron, Pearce and Morie, 2007).

Other research suggests that the portrayal of female avatars may be a significant contributing factor as to why the games industry may not appeal to women (Sheri Graner Ray, 2004). According to Graner Ray, if a company portrays female avatars in a demeaning way, potential applicants to that company may assume females will be treated in a demeaning way within the workplace. The sexual representation of females in games also contributes to the industry being viewed as for boys. Graner Ray goes on to say that 'booth babes', a term used to describe minimally dressed women at conference and shows and other sexually orientated themes, at professional games gatherings and conferences suggest the industry is for 'boys only' (p150).

There has been a paucity of research conducted on women who work in the games industry, with the exception of Haines (2004) and Krotoski (2004). Through a survey and interviews with female game workers, Haines (2004) found that women in the industry wanted encouragement and awareness for young girls to enter the industry and develop a career in gaming. Prescotts' (forthcoming) recent research confirms this viewpoint.

It is apparent that there are a number of issues which may impede women entering and remaining in the ICT and SET industries generally and the games industry specifically. However, other issues not necessarily specific to the gaming industry are

relevant to consider in recruitment and retention. The next section will discuss work life balance, long hours and flexibility.

This chapter aims to evaluate the current position and experiences of women and issues of work life balance and flexible working, within the computer games industry and the wider context of the science, engineering and technology industry (SET). Research is discussed in the context of attracting and retaining women in the workforce of the future. Current findings from a larger quantitative study (Prescott, forthcoming) will provide the focus of the chapter in relation to these issues. The chapter will also add to the paucity of research on the games industries workforce, in particular women within the industry.

WORK LIFE BALANCE ISSUES

Work Life Balance, Long Hours and Flexible Working

Work life balance issues have become proliferate in the literature on women's careers and the career development of women. Women are still in the main responsible for the majority of domestic labour and childcare (Raskin, 2006; Bird and Schnurman-Cook, 2005; Wajcman and Martin; 2002; Blossfeld and Drobnic, 2001 and Simpson 1998). Even when women work from home, research has found that they tend to combine work with childcare (Noonan et al, 2007). The long hour's culture and a culture of presenteesim are important issues to consider when wanting to attract and retain women in the SET and ICT sector and the games industry specifically.

It has been suggested, that to show commitment to job and organisation there is a need for long hours and 'presenteesim' (Simpson, 1998). The long hours culture in the SET and ICT industries makes it more difficult for women and men with caring responsibilities (Gill, 2002; Perrons, 2003) and the industries have been accused of being modeled on men's rather than women's stereotypical lifestyles (Kelan, 2008). Working long hours is an issue throughout the ICT professions and is suggested as a major contributing factor for the low number of women within the sector (WWW-ICT report, European Commission, 2004). Research from western societies suggests that long hours are an issue across the sector. For example, Griffiths, Moore and Richardson (2007) through an online survey of 479 women in ICT across England found a strong long hours and presenteeism culture within the industry. Similarly, Diamond and Whitehouse (2007) through an examination of professional computing employment in Australia found a greater long hour's culture in the private sector and that part time work was a rarity in both sectors. They also found that men and women respond differently to workplace constraints. For example, females with children were more likely to move into areas where hours were more predictable. This suggests that in order to maintain a work life balance, women were choosing a career sacrifice.

As with the SET and ICT industries, the games industry has also been identified as having a long hours culture. This is mainly due to the project based nature of game development and long hours are especially prevalent at 'crunch time'. Crunch time within the games industry refers to when a game is due to be released, it is a notorious time for extremely long hours. In particular, the games industry has been viewed as a workplace which tends to favor young and unattached males, due to its long hours culture and the potential need to relocate (Deuze, Martin and Allen, 2007). Furthermore, the long hour's culture within the industry has been acknowledged by an IGDA report (2004). The reports suggests that three out of five developers work 46 hours or more in a normal working week and workers can spend anywhere from 65 to 80 plus hours per week at 'crunch time'.

Recent international research by Prescott (forthcoming), with over 450 women working in

the gaming industry found that 77% of women felt that a long hour's culture was prevalent in their organization (a similar finding regardless of developmental, non-developmental or academic roles), supporting previous research alluding to long hours in the games industry (Haines, 2004; Deuze, Martin and Allen, 2007). Prescott (forthcoming) found that more than two-thirds (68%) of women reported working up to 45 hours a week. This reported average working hours could be considered reasonable and are for example within UK and European Union working time directives or regulations. However, a third of women (32%) reported working considerably more hours, with 22% working 46-55 hours and 10% more than 56 hours per week. It may be the case that those working longer hours were in the middle of a 'crunch time' period and were basing average hours on their current experience, as opposed to regular practice. How long such periods may last is variable and the impact on careers, work life balance and family issues is worthy of further exploration. This is important as Prescott (forthcoming) also noted that a significant proportion of women (44%) felt that the long hours worked impacted on their health and well being. In addition, 50% felt that hours worked had an impact on personal relationships.

Consalvo (2008) conducted in-depth qualitative interviews with 10 female game developers. The main findings of the research focused on 'crunch time' and long hours, with 'crunch time' in particular viewed as a significant challenge to women in the industry. Crunch time was thought to be ingrained in the work culture, with passion viewed as the main reason why they work the long hours. Consalvo suggests that women, like their male counterparts also have a passion for playing games. Consalvo viewed passion as problematic in that 'the ideal worker is constructed as someone possessing a 'passion for games', and that passion is used to help maintain work practices that may ultimately kill the passion' (p186). If this is the case, then for women with children or care responsibilities, there may be a passion for the work, but only limited hours. This may create conflict not only in work life balance, but also work based identity.

Prescott (forthcoming) noted that more than half of women (66%) reported that in their organization work life balance policies needed improvement and a quarter (26%) felt that work life balance was not considered important in their organizations. A lack of understanding or sympathy towards work life balance was also evident, with 63% of women feeling that colleagues were generally negative if they had to leave work for outside commitments. Importantly, the majority (85%) of women thought that work life balance was good for productivity and in order to recruit and retain women, employers must be willing to endorse and encourage initiatives such as organization cultural bias to long hours and encourage flexible working were possible.

Flexible Working

The Office for National Statistics (ONS, 2008), reports that women are more likely than men to work part-time, particularly if they have dependent children, 38% compared with 4% of men with dependent children. Despite women's increasing participation within the UK workforce, in 2008 almost half of women's jobs were part- time compared with approximately one in six of men's (ONS, 2008). Working part-time is often viewed as a solution in managing the coexisting roles of work and motherhood for many women with dependent children. However, combining work with other roles is a major disadvantage for women in the workplace (Straehley and Longo, 2006). Furthermore, research suggests that career development is structured around male experiences, but should include the diversity of women's career experiences gained in paid work and include domestic labour in the home (Tracey and Nicholl, 2007). Hughes and Parkes (2007) found that individuals who had control over their working hours suffered

less work-family conflict, despite long hours. The authors suggest that employers should provide employees with some flexibility and control over work hours to reduce the negative impact that long hours can have.

Valenduc et al (2004), found that women with children were rare in the ICT sector and suggests that due to a lack of women with families in the industry, there is no pressure to change working practices or workload. Certainly findings from recent research would support this (Prescott, forthcoming), the majority of women were younger (35 or under) and without children, only 6% of women worked part time. However part time work, often meant full time hours, one woman noted that "*I'm paid for part time, 32 hours...but it always runs into full time*". Change is needed, as Griffiths, Moore and Richardson (2007), have suggested, instead of women and older workers adapting to the ICT culture, the ICT industry should change and broaden its appeal to recruit and retain a diverse workforce. Change in working practice such as promoting part-time or flexible working is required. In addition, ensuring that the long hours culture is no longer viewed as the status quo and removing the ingrained masculine culture may lead to improved workforce retention, and greater job desirability in the sector to women.

Another issue of importance to women in professional careers is relocation, this is especially when women have partners and or children to consider. It is often the case that women will relocate for their husbands, or partners careers, yet it is rarer for husbands or partners in a relationship to relocate for the woman (Bogg, 2007). This ability or willingness to relocate is considered a potential factor as to why the games industry is dominated by men and not as appealing to women (Deuze, Martin and Allen, 2007). Prescott (forthcoming) found that over a quarter of women (27%) stated that they would not relocate and 23% were unsure if they would relocate. This may be due to workforce loyalty, a fear of not obtaining similar game development work, what Consalvo (2008) refers to as a 'passion for games' (p186).

Relocation is currently an important issue within the games industry. In 2008, it was reported (Oxford Economics) that the UK games industry could face a downturn which would mean '*a permanent loss to the UK economy as the highly skilled and specialised game developers are most likely to be actively recruited by foreign companies as UK based opportunities disappear'* (p29). In addition, other countries successful in game development i.e. Canada, have recently been actively and successfully recruiting staff, from countries such as the UK (Oxford Economics, 2008). A decline in the UK industry is currently occurring and there is concern in the industry for job losses, but also a drive to retain the most talented developers (Frear, Develop magazine, February 25, 2009). This has positive implications for work life balance, as in order to recruit and retain the most talented employees, working practices will need reviewing.

Relocation will be a viable solution for some current UK game development employees, as opposed to the alternative of finding a new career. This could have a dramatic impact on the careers of many of the UK games industry employees, especially females and in particular those with families. Such a change in workforce demographics could lead to the feminization of the UK games development workforce, an event occurring in some other professions, such as medicine (Levinson and Lurie, 2004). Therefore, although country relocation may not be possible for many women with families or care responsibilities, the event may lead to an improvement in UK working practices, as the industry strives to recruit and retain a workforce that could be increasingly female and include more women who choose to have families. However, with the current UK and global economic downturn, its impact, both positive and negative on recruitment, retention, working practices and salaries is inevitable.

Recommendations

The current chapter has discussed a number of issues with the main focus being on work life balance. Major issues reported in the research in this area include the long hour's culture associated with the industry and the lack of flexible working practices. Current international research by Prescott (forthcoming) has highlighted that three quarters of women (77%) reported a long hour's culture in their organization and that a third (33%) were unhappy with their current work life balance. Women who are the primary carers, such as those with children, generally require predictability (mainly regular hours) in order to plan childcare. Improvement in working conditions may lead to women choosing to remain in the industry (for example after starting a family), a benefit of this would be that having a greater number of women in games development may also have the added benefit of enhancing the image of the games industry, as a potential career for young women.

Long hours and 'crunch time' are important issues within the games industry and reducing their impact on employees will provide benefits to the organization. For example, organizations could incorporate project management training for leads and managers, to yield greater effectiveness of project timelines and targets. Crunch time would be difficult to eradicate completely due to restricted budgets, last minute problems and deadlines. However, by effective project management training, employee work-life balance would be enhanced. It is suggested that the long hours associated with the role of games industry, become perceived as 'occasional', as they would often be in many professional roles, as opposed to 'regular'. Whilst individuals who have a passion for games and gaming enjoy their jobs, there is a growing recognition that achieving a work-life balance is of greater importance for many individuals.

Flexible working practices should be encouraged. This would not only improve the image of the industry as a 'family friendly' working environment, but would also assist in retaining more women, especially women with or considering having children. If more women with families are visible in the industry, this in turn, sends out positive messages that the industry is not just for the 'boys' and that women, and those with families can be successful and have a viable career in the games industry.

FUTURE RESEARCH DIRECTIONS

Due to the relatively recent emergence of the games industry, there are a number of possible directions for future research. Future research will not only inform recruitment, retention and progression in the industry, but also the ICT and SET sectors. Interesting questions include why are some women attracted to the industry and what makes them stay? Does the industry appeal to a certain type of women in particular?

Although research has started to look into these questions, i.e. Consalvo (2008), it would be beneficial to evaluate the career trajectories of men and women in the industry generally and also, how does gaming differ from other creative industries, such as film and television, in terms of the recruitment, progression and retention of women.

The issue of employees aging in the industry also requires attention, Prescott (forthcoming) reported that more than two-thirds (67%) of women in her study were under 35. Will employees choose to remain in a (often) perceived, 'young' industry? or will there be a constant turnover of employees (men and women)? As the industry ages, will the demographics of women within the industry change in terms of ages, children and care responsibilities? If more women within the industry have children, how will attitudes towards relocation and work life balance change? Are women in the industry not having children due to their careers, or are they postponing child bearing until their career established? In regards

to flexible working, it would be interesting and extremely useful in terms of policy development and implementation to evaluate women who do work flexibly and the impact on their careers.

This chapter has highlighted a number of emerging themes, issues and questions for discussion that are of relevance to employers, professional bodies, policy makers and researchers. Further research will benefit the computer games industry and the wider ICT and SET sectors.

CONCLUSION

This chapter has focused on the current position and experiences of women working within the computer games industry, the ICT sector and the wider context of the science, engineering and technology industry (SET). Recent global data on women working in the computer games industry was discussed in relation to the long hour's culture associated with the sector, the lack of females, especially females with families, skills shortages, work life balance and flexible working.

The games industry not only needs to improve its appeal to a more diverse workforce due to the current skills shortage it also wants to improve its appeal to a more diverse workforce. The aim of a more diverse workforce within the industry has the potential of making games with more appeal to wider and more diverse audience. The current chapter has highlighted a number of areas were the games industry could significantly improve its appeal as a viable career to women. The image of the games industry like the wider ICT and SET industries is still very much 'boys work'. However, this image could change with a more diverse workforce and with an increasing number of female gamers worldwide, the industry in general may lose its 'for boys only', masculine image. The industry needs to widen its appeal through an increased awareness of the variety of roles and skills within the industry and highlighting the benefits and rewards of working in such a creative, competitive and growing industry.

Potential further research areas were suggested, as a method of contributing to the growing body of evidence on the experiences of women, working in male dominated professions. Understanding the experience of women working in the male dominated computer games industry has been highlighted as important in order to improve future recruitment and retention and the appeal of the industry generally.

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KEY TERMS AND DEFINITIONS

Flexible Working: Practice that facilitates a work life balance

Games Industry: Computer or video games industry

Work Life Balance: The balance of work and other life or role commitments

Long Hours: Culture of long hours that may be used to demonstrate career commitment