Women in IT - The Latest Endangered Species?

There are increasing concerns regarding the gender imbalance in the technology industry. It therefore came as no surprise when Google, Facebook and Twitter released their diversity figures earlier this year, confirming beliefs that the technology industry is still very much a male dominated sector.

Statistics show that women occupy only 17% of tech roles at Google, 15% at Facebook and 10% at Twitter. Perhaps even more alarming, is that the number of female IT professionals in the UK has halved in the last 20 years to just 17%. This is an especially worrying figure when we consider that technology is fast becoming an integral part of our corporate and personal lives, with digital literacy being crucial to employability and the competitiveness of the UK’s digital economy. So where are all the women and why are they put off pursuing careers in the IT sector?

Firstly, we need to identify the root of the problem. I feel quite confident in suggesting that the industry either lost the majority of technically talented, driven and creative females during their early years at school or college, or alternatively schools simply failed to encourage and develop technically able female students. Unlike the core subjects (English, Maths and Science) which remain compulsory throughout the school education system, ICT is no longer obligatory after year 9. Furthermore, the separate discipline of Computer Science is entirely absent from the curriculum, meaning a large number of pupils probably aren’t even aware of what Computer Science is.

When school pupils reach year 9, they are given the option to drop non-core subjects. The classes students are allowed to drop are categorised into groups, from which they must pick only one subject per category. Sadly, and perhaps typically, at my old school most girls opted for Drama or Textiles which were encouraged and known to be more female dominated subjects.

I, like many of my female friends, viewed the IT sector as being populated by geeks, working in silence or wired to their MP3 players, within grungy work environments. Unbelievably, this still didn’t dissuade me from choosing ICT at GCSE level because it was a topic which I enjoyed and it was something I believed I was good at. Nonetheless, I often found myself staring endlessly at spreadsheets, surrounded by rowdy boys and dirty keyboards, envying my friends in their creative and sociable Drama class.

But my hard-work and determination paid off when I was awarded an ICT GCSE. Soon after, I found myself thinking about what A Levels I wanted to choose. ICT was among one of the many subjects I had a keen interest in and by this time I’d established that I had something of a talent for. With this in mind, I attended an introductory ICT class during an Open Day at a Manchester college where I was greeted by a female ICT teacher.

“Are you sure you want to study ICT?” she asked. She then added, “Hardly any girls sign up to this class. We only had two on the entire course last year.”

On reflection her response was rather reminiscent of the recent film The Imitation Game, based on Alan Turing’s enigma code breaking during the Second World War. In the film, Joan Clark (Kiera Knightley’s character) is mistaken for a secretary when she enters a room full of male code breakers. The response I received in 2009 was in essence no different to the response Joan Clark received 69 years earlier. Women
have been walking into tech lessons for decades and are still being looked at in a way as if to say ‘I think you’ve got the wrong room!’

Exposure to an apparent confirmation of my worst stereotypical fears finally led me off the track. I attempted to convince myself that veering away from the ICT career path would be for the best. However, several years down the line, I am now working for a global IT company, counting my blessings that I made it here despite the biases, discouragement and opposition.

How can we overcome such misconceptions in order to boost the number of women in IT?

1. Make ICT a core subject in schools

I believe we should be campaigning to make ICT lessons a compulsory subject throughout the entire duration of a high school education. Digital technology is fast becoming a vital part of our everyday lives, at work and at home, and this should be reflected in the educational system.

2. Teach girls the relevance and importance of ICT in everyday life

Most teenagers in this country have grown up with easy access to technology, making them part of a ‘digital native’ generation. Despite this, few females wish to contribute to the development of the digital software they have subconsciously come to rely on. Digital literacy is crucial to the competitiveness of the UK’s digital economy and there is now an increasingly strong need to have a supply of individuals capable of designing, developing and operating the technology of the future.

3. More and better career guidance in Schools

The school curriculum should be responsible for informing girls of the full spectrum of possible career paths that qualifications in ICT could lead to. The education system needs to highlight the impact a technical background can have on a woman’s career options and the economic potential that accompanies it. Arguably, one of the biggest reasons women do not venture into the IT sector is because they often don’t understand the broad options within tech fields.

4. Provide separate ICT lessons for girls and boys

For decades ICT classes have been ostensibly intended to appeal to both boys and girls, but this isn’t necessarily the way forward. Whilst such views may be controversial, Psychologist Professor Verma has determined that “…there are connections in the brain that are hardwired differently in men and women. Functional tests have already shown that when they carry out certain tasks, men and women engage different parts of the brain…” (2013, Professor Verma, The Independent).

It is possible therefore, that certain elements of ICT are more suited or appealing to men and other elements lend themselves better to female strengths. Some women are perhaps failing to aspire to careers in ICT because they find the most well-known and typical elements of ICT to be dull or uninspiring. This is not to say that all women dislike coding because they find it difficult or boring. It is merely a suggestion that coding may not appeal to as many women as men, because women engage differently with the task. Perhaps then, there is a need for the introduction of a variety of modules which may appeal to a greater number of females and help them explore the various facets of ICT.
What is the Government currently doing to bridge the digital skills gap?

In December 2014, The Government declared that a new Computer Science GCSE will be launched to focus on coding and the first ever national college for digital skills and coding will be established to train the digital innovators and technology experts of the future.

The new GCSE in Computer Science is being introduced to establish a national standard, covering the most up-to-date issues including designing, writing code, cyber security and the ethical and legal impacts of digital technology.

However, the Government hasn’t stated how they are going to specifically draw women into the sector. In my view, they are still targeting a homogeneous and unisex demographic, which is unlikely to attract many more girls to the industry than at present. They are also focusing on coding and programming, elements of ICT that have an entrenched reputation for being ‘geeky’ male-dominated fields. Skills that may appeal more to women such as system design, user experience design, software and usability testing are not emphasised enough. To appeal to more women, the Government must show an exciting and engaging range of occupations available within the sector, while trumpeting the success of inspirational female role models in the industry.

One such initiative, Code Club, is targeting coding at young children and has seen a massive surge in the number of girl participants.

Code Club

Code Club is a nationwide network of free volunteer-led after-school coding clubs for children aged 9-11. The projects teach children how to program by showing them how to create computer games, animations and websites.

During 2014, an additional 750 Code Clubs were established in UK primary schools; bringing the total number to 2,150. Recent figures show that Code Club is now reaching around 30,000 children, 12,000 of whom are girls. The hope is that the young girls who are participating in these classes will continue their IT journey into secondary school and that this will help close the GCSE and A-Level Computing Science gender gap.

This is a massively important development. Targeting children during their young formative years may in the future help to transform the industry by reaching them before they fall victim to the stereotyping which prevents them even properly considering the choice of learning IT skills in the first place. Although this initiative is having a positive impact on girls, it is again vital that we don’t lead girls into believing their only career option in IT is to be a programmer or coder.

What are other organisations doing about the problem?

Some schools and colleges are already making strong progress in addressing the gender IT skills gap. Close neighbours of our Altrincham Headquarters, Loreto Girls Grammar School is the national lead for STEM (Science, Technology, Engineering and Mathematics) and is setting the benchmark for leading education that takes girls beyond the normal confines of the National Curriculum. Loreto give their students the
opportunity to apply their IT skills and talents to solving real world problems. The Headteacher of this multi-IT award winning school, Jane Beever, told me;

“We passionately believe that the key to inspiring our girls is not the acquisition of IT knowledge but its application. The national awards that we have won during the past year all clearly illustrate this. Our girls won three of the eight categories in the national TeenTech Awards, including designing Dementiago, an app that enables the family of elderly dementia sufferers to track their movements. Another group of girls won the BIMA (British Interactive Media Association) ‘D’ Day award for their Night Light app, aimed at keeping young women safe on the streets at night.”

Other schools and colleges, such as the soon to open UTC@MediaCity in Salford, aim to provide an exciting specialist digital and technical education for students of both genders aged 14-18 from across the North West Region. Meanwhile, BIMA (which I mentioned earlier) aims to connect digital professionals from across the UK’s creative and professional sectors with young people in our schools and colleges.

Changes are also beginning to take place outside of the education system. Growing networking opportunities are empowering individuals by facilitating connections with similar advocates. This has enabled the formation of more sizeable professional groups which are better positioned to influence change. For example, TechUK have a ‘Women in Tech’ Programme which focuses on providing a network of senior women advocates within the technology industry. Their main aims are to promote the benefits of gender diversity in the industry, improve the experience and process of recruiting women in the IT sector, and raise the profile of successful women in the industry. Girls in Tech, a global organisation is another example which is focused on the engagement, education and empowerment of influential women in technology.

Women in IT Awards - January 2015 will see the launch of the UK’s first ever Women in IT Awards. It will raise awareness of the rapid decline of women in the IT sector, while providing an opportunity to celebrate the outstanding technical innovation that was achieved by women in 2014. The gala evening, on the 29th January, assembles the industry’s highest-achievers to shine a light on the tremendous value that women bring to the industry and the satisfaction and fulfilment that such careers can bring.

At Informed Solutions, we are very much aware that we are currently living in a world dominated by technology that is increasingly embedded in everything we do. We believe the industry cannot move forward without both men and women, passionately and with purpose, pursuing careers in technology. Research has suggested that tech companies with women on management teams have a 34% higher return on investment and that increasing the number of women working in IT could conservatively generate an extra £2.6 billion a year for the UK economy.

With a female CEO, Elizabeth Vega, at our helm and numerous female employees (including myself) who are keen and committed to our careers in IT, we would like to encourage greater partnering on this initiative. We invite other companies and professionals - who feel equally passionate about achieving greater diversity in their professional workforce and inspiring young women to take up careers in the industry - to join forces with us. This is why we will be ‘walking the talk’ and sponsoring the Women in IT awards, where Elizabeth will be presenting the award for Innovator of the Year.
We also recently sponsored ELATT, the East London Advanced Technology Training Charity, which gives young women, as men also, from disadvantaged backgrounds the opportunity to acquire ICT skills and training which they might otherwise not have had.

However, unless more is done, there is a growing risk that girls and women in IT may become yet another endangered species. The industry is missing out on many millions of pounds of increased productivity per year, due to the skills gap arising from the lack of female contribution. Although we are beginning to make headway, we have only just stepped out of the door on the long journey towards inspiring young girls to embark on careers in ICT.