

Women in STEM: Are you in or out? Survey Overview

Survey background

This survey was completed by over 5000 respondents with a STEM related qualification. The survey ran between May and September 2014 as a collaboration between Prospect, Women in Manufacturing, TRS and the Women's Engineering Society.

It addressed the challenge posed by one respondent who told us **'I would think twice before encouraging any girl to enter a male dominated field as most women are not allowed to succeed nor get recognition or promotion for good work.'**

Whilst much effort and some positive results have been achieved in encouraging girls to enter the engineering and applied science sectors, there continues to be a problem with qualified women remaining in STEM after career or maternity breaks. This 'leakage' of qualified and experienced women represents a huge loss of talent, and with a skills shortage in engineering looming this is a loss that we cannot afford to ignore.

The survey sought to enhance understanding of barriers that may exist for women when entering and/or returning to a STEM career and steps that can be taken to combat these. Moreover it was designed to find what would make the biggest impact in attracting women back to STEM in order to focus collective efforts into a meaningful campaign, increasing the visibility of the issue and reach the untapped potential.

Based on our survey findings we would strongly recommend that 'returnships' are developed by employers working with other stakeholders in order to bring women back from extended leave.



Respondent overview

Respondents were sought via the partner organisations and their associates' members, contacts and networks; through University alumni databases (where women qualified in STEM but would still be registered); through the teaching profession networks; and through a variety of female network groups such as Mumsnet, Mums in Science, Netmums etc. In summary:

- ✓ Over 5000 women with STEM qualifications responded to the survey
- ✓ 94% of respondents are currently in work
- ✓ Age of respondents was fairly well spread between 20-60 with the smallest percentage (16%) in the 50-60 age bracket
- ✓ 90% have degrees and 36% have postgraduate qualifications
- ✓ 37% do some form of voluntary work

Key findings

The following key findings and implications can be drawn from the survey:

- ✓ **1/3 of respondents went on placements when at university, and 45% of those went on to**

- ✓ **work for the same company afterwards.** Placements are therefore seen as being conducive to both recruiting and retaining women in STEM
- ✓ **69% went straight into a role related to qualification, 13% went into a related sector but not in a technical role, 18% entered a non-STEM related sector or role immediately after qualification.** Latest data from Engineering UK confirms that a lower percentage of women than men go into engineering employment after qualification
- ✓ **73% work full-time, 19% part-time, 6% flexi-time, 1% condensed hours** Relatively few women employees benefit from flexible working opportunities.
- ✓ **On completion of qualifications 0.1% set up their own business** This is a surprisingly low proportion.
- ✓ **12% identify themselves as a senior leader, director or CEO**
- ✓ **54% are members of a Professional Institution.** Membership is not seen as key to career progression and there is a big opportunity for growth.
- ✓ **28% have taken a maternity break and 7% have taken a career break.** A very low percentage. See p3.
- ✓ **Two thirds of those who have taken a maternity break returned to work within one year. 36% of respondents took cumulative breaks of over 3 years and 10% took over 5 years (cumulative) break.** This is a significant amount of time to be out of a STEM career and help in returning after extended breaks is crucial.

Barriers exist to returning after maternity leave, but these can be overcome

An alarming 60% of respondents felt that a range of different barriers existed to prevent their return to the workforce following a maternity or career break. These barriers can be broadly classified as:

- ✓ **Financial:** including the cost of childcare (52%);
- ✓ **Time:** Not enough flexitime, job sharing, condensed hours, part time opportunities (27%);
- ✓ **Training and Guidance:** Not enough help and support offered (25%);
- ✓ **Geographical:** Not able to move to find work (16%).

Respondents were asked to identify ways in which these barriers could be overcome, and the responses are summarised in the word cloud below. In a proportionate size

Flexibility

Flexibility in working practices is one of the key factors in allowing women to return to work after a break. The survey showed that 73% work full-time, 19% part-time, only 6% flexi-time, and 1% condensed hours (e.g. term time working).

More flexible working patterns were identified as being an enabler to allowing women to return to work. This would allow costs relating to childcare and commuting to be cut, and give a host of other benefits achieved through flexible working hours. The use of technology could be used to overcome geographical and time constraints, and also to allow a better work/life balance whilst caring for a young family. A more flexible approach to returning to work, incorporating training and guidance was also seen as an enabler. Part time opportunities, job shares and condensed working hours are also key enablers and valued working conditions

Training

43% of respondents said that additional training was imperative for them to return, however they felt that funded training opportunities covering a combination of soft skills and professional/technical qualifications would be an essential enabler.

Types of training mentioned were:

- ✓ **Careers advice**, including routes back into engineering and recruitment matching services

- (14%); help with updating CVs and with interview technique;
- ✓ **Mentoring** (8%);
- ✓ **Professional development** (43%);
- ✓ **Specific sector related training and development** (12%).

Also training for their **employers**, such as on the benefits of diversity, and on the prevention of unconscious bias, was cited as an important factor (6%).

Pay

Respondents made clear that they felt that higher pay was offered in other sectors, which on its own is a significant barrier. However, and more specifically when returning from maternity leave, pay needs to be sufficient to outweigh childcare costs. Part-time opportunities seem to be much more prevalent at lower grades, significantly restricting the earning potential of those wishing to return on this basis. However, respondents made it clear that recommendations for employers should not relate solely to maternity leave, but should also consider parental leave (which can be shared) and leave for care of other family members. These are changes that would benefit all employees - not just women.



Just 28% of respondents have taken a maternity break

The Survey found that just 28% of respondents have taken a maternity break (be it single or multiple). This figure is exceptionally low when considered against a background of 80% of women in the UK having children at some point in their life.

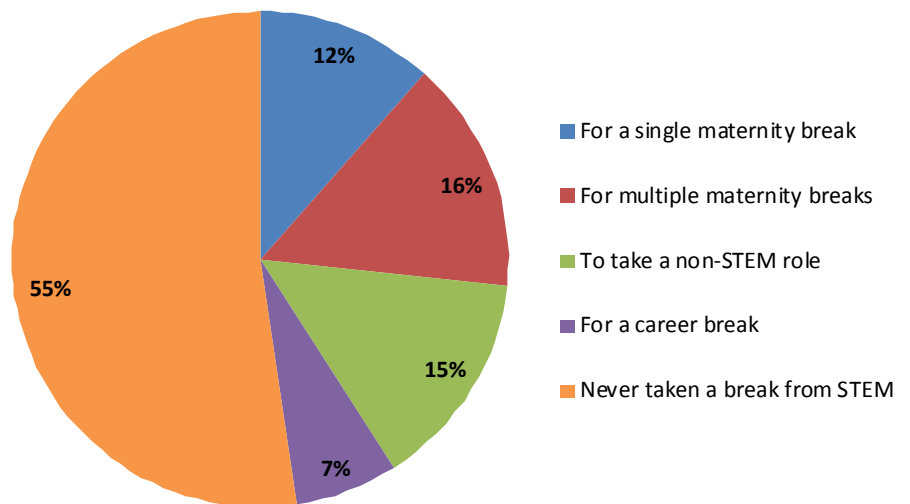
Possible explanations include:

- ✓ Women who go into STEM could be more likely to prioritise their career and simply choose to not have children or, perhaps more likely, believe that this is not an option if they want to progress in their STEM career;
- ✓ Those women who take a maternity break have not returned to the sector and hence have not responded to this survey, thus making the numbers look artificially low. If this is the case it illustrates that the barriers perceived to returning after a maternity break are in fact very real and are preventing women from working in this sector;
- ✓ Barriers to re-entry may deter those who do have children from taking extended maternity leave.

Concerns about barriers following (and even before) maternity leave are highlighted in the words of the respondents, one of whom said **'I am interested in continuing my role, but worried about striking a balance between building a career and building a family.'**

Whilst another summed up concerns about the culture and the treatment of pregnant employees by stating **'I am currently pregnant, and after spending a considerable amount of time and effort growing my career I could hear the groans when I announced the pregnancy'**.

Reasons why women leave the STEM sector



Reasons for not working in STEM

Around 30% of respondents were not currently working within STEM. When asked to explain this, a range of reasons were mentioned, as indicated below.



Poor levels of pay (in comparison with other sectors) is the biggest single reason that those not currently in STEM have given for not returning. As one respondent said **'I'd love to return, but I simply can't afford to.'** Also worrying is that some of those who qualified in STEM subjects have either found better remuneration by using their qualifications elsewhere, or in some instances not using them at all.

More broadly, many respondents felt that general flexibility, the speed of career progression, the suitability of available roles and the general working environment were better in workplaces outside of STEM. On the theme of flexibility one respondent

summed it up by saying **'I am trying to go back into a STEM job, but it must be closer and flexible, to manage my family's needs and emergencies.'**

Finally, a number of respondents identified themselves as **'too old'** to be working in STEM. Some said that they would love the chance to work part-time, but with a lack of flexibility this wasn't really an option. In an era without a default retirement age, this should not be taken at face value. Increased efforts could be made to target this group, many of whom will have a wealth of experience to contribute.

Recommendations

The challenges highlighted by our survey are not new, but we know there is good practice that, where implemented makes a huge difference. Here briefly are our recommendations for each of the identified stakeholders to address.

Employers

Employers should recognise that maternity leave represents a challenge but also an opportunity for their business, and that there are many ways that they can ensure that women returning from a break are not disadvantaged or perceived to be of less value to the organisation, but in fact of greater value.

- ✓ Better keeping in touch mechanisms for women on maternity leave;
- ✓ Allocation of mentor or buddy during and after maternity leave;
- ✓ Offer flexible working, part time job share or compressed hours to encourage women to return;
- ✓ Offer training on return to work focusing on soft skills, career pathways, management progression, work/life balance, and technical updates;
- ✓ Training for managers to maximise benefits of women returning from maternity leave;
- ✓ Provision of 'Returnships' to bring back women from extended leave.

Women In STEM Networks

Professional networks are important and these groups have a role in supporting women throughout and after their maternity leave.

- ✓ Join together to provide affordable and accessible training opportunities;
- ✓ Work with professional institutions and other groups to support women to access CPD opportunities during career breaks;
- ✓ Keep records and keep in touch;
- ✓ Provide networking opportunities.

Universities and wider talent acquisition

- ✓ Universities can be influential in targeting and supporting this group through their alumni database, and they should be included in any collaborations to reach these women who are currently out of STEM and inaccessible;
- ✓ TRS, Prospect, WES and Women in Manufacturing will have a significant role working with and through their stakeholder membership;
- ✓ The commercial recruitment sector should share the responsibility of supporting women into the sector.

Professional Institutions

Women who are members of Professional Institutions should be supported through this important part of their career journey by their Institution, especially if they are not planning to return to work for an extended period of time. 46% of women respondents were not members of a PI, and there is scope for enrolling and supporting more women in STEM.

- ✓ Measure and track this group of members;
- ✓ Offer reduced fees for women on maternity breaks and advertise these before women leave work;
- ✓ Develop products and services to support women on maternity leave and when returning to employment including mentoring, training/reskilling opportunities and CPD options.

Unions

- ✓ Organise networks for women in STEM;
- ✓ Prioritise negotiation of fair employment practice, including equal pay;
- ✓ Provide guidance and good examples of flexible working;

- ✓ Engage with professional and trade bodies to collaborate on careers progression and developmental opportunities.

Government

The Government has a crucial role in encouraging women to return:

- ✓ Establish a minister-led commission to increase the proportion of women in STEM to 30% by 2020;
- ✓ Take decisive action to reduce childcare costs;
- ✓ Be a pioneer and champion of good practice and regularly report on impact.

It can be done:

One respondent wrote of returning to work as a health physicist after 9 months on maternity leave **'the company allowed me to return part-time for the first 3 months until my childcare was established. I was offered training during 10 keeping in touch days, which I took to progress my career on my return to work. I have been back at work for 7 months full time and have since received notification that I am to be promoted. I have found it easy to return to my STEM role, but it clearly helps that I have a good employer.'**

The reality is that more of this is possible. Our very strong view is that a coordinated approach is needed between employers, professional institutions, STEM networks, education, unions and government to highlight problems, drive forward solutions and share best practice.

This survey has served to illuminate some of the problems that continue to exist in supporting women through this crucial period of their career to enable them to transition from their early/mid career to the experienced side of the career spectrum where their skills are highly sought and currently in short supply. A coordinated approach is needed, highlighting solutions and best practice case studies, and a programme of activity to target those who are able to contribute is the next step.