

Women in STEM-based business – barriers and enablers to progression

I have been long passionate about aspects related to gender equality, and upon securing the Athena SWAN studentship at the University of Wolverhampton; I was finally able to research on it. My thesis explores progression and retention of women in Science, Technology, Engineering and Mathematics (STEM) in higher education via the intersectional lens. Under the supervision of gender and intersectionality expert Dr Maria Tsouroufli, Reader in Women and Gender; and Dr Subashini Suresh, Reader in Built Environment, we work towards uncovering extant barriers in academia and finding ways to overcome them.

Nevertheless, as an engineering expert and an accomplished woman in STEM, who is also a part of the House of Commons Women and Work All Party Parliamentary Group, Dr Suresh, is very vocal about linking our work back to the industry to maximise the impact. It was, therefore, on her recommendation and with a great privilege to attend this event on her behalf, to gain better understanding of barriers and enablers experienced by women in STEM-based businesses. I have since signed up with the Innovation Alliance for the West Midlands (IAWM) and very much look forward to working with the local industry experts on innovation policy and practice.

In terms of the industry, only 25% of the core STEM workforces are women. Furthermore, only 13% of managers in STEM-based businesses are women. These numbers are even lower in engineering and technology-based businesses. In honour of Women in Tech Month and as a part of #DIDFEST2019 IAWM dedicated their April Innovation Policy and Practice event to help and address the questions surrounding female career progression in STEM.

When attending the breakfast meeting, hosted by Make UK, it was encouraging to find a room full of busy professionals who braved the cold and rainy West Midlands weather and selected to dedicate their morning to discuss ways to reach gender equality in the industry. What was additionally reassuring was that around 20% of attendees were men and their presence confirmed that equality is not an exclusively female concern, but something both genders are willing to work towards side by side.

The panel chaired by Tracy Westall, the non-Exec Director DoT, and Advisory Board (<https://www.innovationbham.com/>) comprised of Faye Pressly (<https://www.vanti.co.uk/>);

Charlotte Horobin (<https://www.makeuk.org/>); Kate Ashworth (<http://www.egnida.co.uk/>) and Jane Whitlock (<https://www2.deloitte.com/uk/en.html>) engaged the audience in discussion on 'Why is the progress in terms of numbers of women in STEM so slow.'

During the discussion it transpired that industry professionals are concerned that low numbers of women at the very entry into the STEM pipeline are a big reason for low numbers of women in STEM workforce. Particularly the unclear public understanding of the diversity of career streams available within engineering; and the lack of clarity and visibility of STEM professions often leave children without adult STEM role models socialised away from the field. The matter of optics, particularly in cases of girls, means they end up directed towards subjects that later make embarking on a career in STEM challenging.

The importance of role models and mentoring were emphasised as crucial not only in the early stages, but also during later progress through the career pipeline. Many female leaders in the room credited male mentors, in their experiences, as greatly beneficial, confirming yet again that contribution of both genders is vital.

Further concerns when discussing challenges women face during their journeys towards leadership roles included gendered expectations normalised in personal lives of women; lack of confidence when applying for promotions; issues with the work-life balance, allowing for little time for care-giving or well-being activities; lack of flexible-working opportunities; non-inclusive company cultures and unconscious bias.

In terms of progression enablers, the panel felt that successful models for achieving company culture change vary dependant on company size. Whilst smaller companies benefited from perpetuating the change systematically step by step from within, larger companies reported that gender targets proved more fruitful.

Attendees were finally invited to relate to their companies recommendations of dedicating more resources towards creating inclusive company culture; enabling more male and female mentors and positive role models; and the need to encourage and support talented women who may not realise the full extent of their potential.

- Andrea Mondokova