

National Association of Women in Construction Scholarship Essay 2018

The engineering and construction industry affects almost every element of our daily lives, from travel and work to leisure and technological advancement. The industry will better serve society as a whole if those working within it represent a balanced cross-section of that society. This makes it all the more crucial that the industry consider and apply ideas from the entire population, rather than just from males. By doing so, the industry could harness a pool of potentially brilliant ideas. Unfortunately, the construction industry remains one of the least gender diverse of its kind. In 2015, only 15.43 per cent of engineering graduates in Queensland were women (Engineers Australia, 2016). This inequality is one of the many reasons I am driven to support NAWIC's Women On Tools Committee to achieve their target of having 11 per cent women in frontline construction roles by 2020. I believe that tackling gender diversity issues in the industry will require a collective approach from high schools, universities, industry and the Government. These bodies play a critical role in creating awareness, providing education and introducing policies and programs that attract and retain women in the industry. Through these three key strategies, we can shake off the current stigma and change the outdated perceptions that the industry faces today.

Secondary education is in a unique position to raise awareness of women in STEM. STEM fields shape our future and are becoming more important as we grow to be a more technological society, however these fields are currently dominated by men (Mayers, 2016). I observed this reality in my transition from an all-girls high school to Civil Engineering at university. Many of my male counterparts at university had been offered engineering as a subject at high school. This platform meant that they were a step ahead in their first-year studies and thus more likely to stick with the degree. High school educators carry the responsibility of planting the STEM seeds for young women. The first step in promoting STEM subjects is taking young women on excursions to major construction sites and offering opportunities for girls to attend events hosted by groups such as the not for profit organisation, Power of Engineering. This would spark their interest in the STEM field, and by schools also offering all four STEM subjects, not just Maths, Science and Technology, young women would be more likely to select these subjects. By offering apprenticeships in construction and providing undergraduate and industry professional mentors, young women would be more likely to successfully continue their STEM studies at university. It is essential that we harness the enthusiasm of teenagers early in order to bring a new generation of women into the sector.

Encouraging female students to undertake studies in STEM is only half the battle. Retaining women in their studies at university is equally important for the future of the engineering and construction industry. The wide array of engineering and construction scholarships and societies offered to university students certainly shapes an empowering environment for young women as they commence their studies. Continuing to provide and fund these programs is vital as they provide women with an incentive to eliminate the misconception that the industry is a 'boys club'. It is essential for engineering and construction faculties to invite students to step into their steel caps early. By incorporating everyday examples and practical placement opportunities into the course work, students could apply their studies in a real-world context and therefore be more driven to complete their degree. In addition, developing a formal mentoring program within tertiary institutions would be a beneficial tool to further educate students, personalise their experiences and offer them support in their transition into the industry. Further efforts should also be made to increase the number of women in academic and leadership roles as the currently limited representation of female educators paints a discouraging picture in young women's minds during their university studies. After all, without having role models of the same gender, a young woman may struggle to visualise what her future holds. Indeed, I was inspired to choose Civil Engineering as my major because of the positive influence one of my passionate female lecturers had on me. These small but powerful kernels of inspiration are critical in propelling women into the construction industry.

Gender diversity is essential for companies in the 21st century who wish to guide the study paths of the younger generation, innovate and ultimately maximise their financial positions. Therefore, it is critical that engineering and construction companies devise transparent strategies to recruit and promote

women. The construction industry is known for its highly demanding work hours which span a variety of locations. This deters women with family responsibilities from joining and progressing in the industry. By integrating modern technology into work practices and diversifying their pool of employees, companies can afford to minimise work hours as diverse workforces are more productive and innovative (Loosemore, 2015). Social and client-based events in the industry must also become more inclusive of women. These events are commonly centred around male-friendly activities such as playing golf or attending football matches, however this may not interest women and may therefore hinder their client relationships. This creates an obstacle to women progressing up the ladder. Additionally, the ongoing pay gap within the industry provides little incentive for prospective and progressing females (Professional Engineers Australia, 2017). Closing the gender pay gap is a fundamental initiative that must be implemented into a business structure to widen the pool of women wanting to enter the growing industry. Since the Government is one of the construction and engineering industry's largest clients, public procurement should be used to assist in closing this pay gap. Alongside this, the Government could specify in their contracts with construction companies that women must be given equal opportunities at every stage of construction projects. Furthermore, the Government should continue to offer funding to the Women in STEM sector; a previous initiative being the \$3.9 million grant provided in 2016 under the National Innovation and Science Agenda (Australian Government, 2016).

The process of shattering stereotypes and eradicating outdated perceptions of the engineering and construction industry can be accelerated by engaging high schools, universities, the industry itself and the Government. We cannot hope to thrive, innovate and create if the industry is not appealing to and understood by the youth of today. The industry must reward, support and provide growth opportunities to staff. As technology advances and the population grows, there is no better time for women to be joining the construction industry. Extraordinary projects such as the \$49 billion National Broadband Network Project and the \$10.9 billion Melbourne Metro Development are currently being commissioned in Australia. In order to deliver this infrastructure, an army of skilled and talented workers must design, build and maintain the projects. Therefore, there is no better time for the education sector, the construction industry and the Government to implement the aforementioned strategies. Doing so will allow them to truly break down gender imbalance in the industry and thus reach NAWIC's target of 11 percent women in frontline construction roles by 2020.

Reference list

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