Emotional Intelligence in Engineering Management Education:
The Missing Priority

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EXECUTIVE SUMMARY

This chapter aims to increase understanding of how engineering students can benefit from integrating emotional intelligence (EI) into engineering curricula at universities. In particular, it explores the nature of EI and argues for the greater use of EI within engineering education, but also considers the challenges of placing an emphasis on EI within this field. The chapter makes recommendations for how EI skills can be incorporated into engineering education and how universities can seize the opportunity to shape the modern engineer and advance the standing of engineering in the future. The chapter's contribution lies in raising awareness not just about the benefits of integrating EI within engineering education, but also on the challenges that an empathetic behaviour entail. The authors argue that university education needs to be able to prepare graduates with engineering fundamentals and also for success and actual on-the-job EI skills.

INTRODUCTION

Emotional intelligence (EI) has been hailed as being an essential skill that individuals need to possess for effective organisational performance. However, this has not been applicable to all industries. Male-dominated professions, such as engineering, have been characterised as being influenced by aggressive management styles, fierce competition, tight profit margins and adversarial relationships (Smithers and Walker, 2000; Walker, 2001). Indeed, engineering workplaces continue to be uneasy environments for professional women, despite the success of women in mathematics and science at university (Gill et al., 2008).

In this masculine environment, emotionality simply implies 'emotional strength', connoting the suppression of, and control over, emotions (Domagalski, 1999). In such professions, men are often deterred by the term 'emotion' itself, as their performance tends to be assessed against certain stereotypes which support and foster decisiveness, toughness, self-reliance, resolution and control (Loosemore and Galea, 2008). On the other hand, engineers are increasingly challenged to emotionally engage with a broad range of internal and external stakeholders. Indeed, recent research (Boyatzis, Rochford and Cavanagh, 2017; Walther, Miller and Sochacka, 2017) positions EI as critical to engineers. However, current efforts to educate emotionally intelligent engineers are hindered by the lack of a conceptually cohesive understanding of, and language for, applying EI to engineering education.

Therefore, whilst research supports the need to nurture functioning interpersonal relationships in engineering (and, by extension, male-dominant professions), many efforts to this effect are hampered by masculinity stereotypes permeating the industry. Within this enduring, albeit changing, sector engineering offers a unique context to demonstrate the 'trainability' of EI to engineering students, an area that this chapter aims to illustrate.

EMOTIONAL INTELLIGENCE (EI)

EI suggests that some people might be more socially and emotionally effective than others in certain aspects of life (Goleman, 1995; Salovey and Mayer, 1990). Goleman, at the beginning of his book on EI, cites Aristotle's words: '[A]nyone can become angry – that is easy. But to be angry with the right person, to the right degree, at the right time, for the right purpose and in the right way – this is not easy' (Goleman, 1995: ix). For Aristotle, those people who know their emotions and know how to deal with them at the right time have a significant advantage in all aspects of their lives, which manifests as the first reference of EI and the importance of emotion in human relationships (Langley, 2000). Similarly, EI involves an array

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