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Educating Future Managers in Higher Engineering Education

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Affect has emerged as an indicator of the quality of relationship between a leader and the followers in engineering communities. Similarly, reports of the close association between communications and management and of the link between managerial communication and employee motivation evidence the affective revolution in working life. [1], [2] The paradigm shift from pure cognition-based models of organizational behavior towards ones combining cognition and affect is resultative of the understanding that emotions are the key psychological driver of thinking, motivation, and behavior. [3], [4] It has recently been speculated that leaders' social and emotional skills contribute more effectively than their mathematical-logical intelligence to the efficacy of their organizations; some go as far as to claim that leadership is enacted through communication. [5] To verify such claims, quantitative research was conducted in seven industrial organizations. The results corroborate that: 1) Managers who are assertive, emotionally available and inspiring receive higher overall scores for their overall management and leadership skills. This implies that emotionally intelligent managers are also seen as more effective and productive. 2) Mathematical-logical intelligence does not predict positive subordinate perceptions of a manager's leadership ability. 3) Such personality dimensions as sociability correlate positively with subordinate perceptions. 4) A manager's assertion predicts positive subordinate perceptions and helps efficient behavior in the managerial role. 5) Older age is connected with better emotional availability. 6) Managers scoring high in logical ability have a stronger leadership motivation, but leadership motivation does not predict higher subordinate scores.

The subsequent demands for a new type of leadership competence that draws not only from substantive and technical expertise but also from personal qualifications give rise to emerging education requirements in the area of personal competence, often conceptualized as emotional intelligence or social competence. [6] The starting point in the present paper is the acumen that value-adding leader performance



is the outcome of persistent, deliberate practice and coaching instead of an innate talent or skill. [7] Engineering education providers subsequently need to acquire a better understanding of social competence and its most pertinent competence development needs. [8] This paper aims to define socially competent leadership and its most pertinent skills in the engineering context. Further, the paper proposes methodology responding to professional skilling requirements. The ultimate educational objective is to develop individual engineers and organizational leaders that not only possess traditional analytical and technical expertise and substantive knowledge but are intelligent also creatively, practically, and socially. ■

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