Emotional Intelligence amongst undergraduates at Loughborough University

What Is Emotional Intelligence (EI or EQ)?
Emotional intelligence can be described as the capacity for recognising our own feelings and those of others, for motivating ourselves, and for managing emotions well in ourselves and in our relationships (Goleman, 1998). Unlike IQ, which is difficult to change, emotional intelligence can be developed through education and training interventions (Goleman, 1995).

EI studies show that managers with high levels of emotional intelligence make better leaders in industry, but little work has been conducted on the impact of education on EI development, particularly in the area of courses leading to engineering management careers for which high levels of EI are crucial to performance.

Why Enhancing EI is important and how can we measure it?

EI is a more effective and powerful predictor than IQ in determining a range of relevant work dimensions including work performance (Goleman, 1995), effective leadership (Butler and Chinowsky, 2006), academic achievement (Parker et al., 2004) and team effectiveness (Jordan et al., 2006). As such, developing EI in undergraduates has the potential to enhance their potential work performance in many positive ways.

A number of established EI instruments are available to measure EI including the EQ-i (Emotional Quotient Inventory, Bar-On, 1997), the MSCEIT (Mayer Salovey Caruso Emotional Intelligence Test, Mayer et al., 2002), the ECI (Emotional Competence Inventory, Goleman et al., 2001) and the EIS (Emotional Intelligence Scale, Schutte et al., 1998).

Helping students to develop their own EI
As well as considering EI in their own teaching and learning strategies, lecturers can actively encourage their students to enhance their own EI through a combination of personal development measures. According to Jarboe (1999) these include developing constructive coping skills for specific moods, being honest with oneself, respecting other people's feelings, and paying attention to non-verbal communication. It is incumbent on lecturers to build in specific interventions to enable students to develop these facets if they wish to encourage their broader EI development. It is important to recognise however, that improving emotional intelligence will take both time and patience.

This summary aims to provide engineering departments with:
(a) an awareness of the value of high EI
(b) a model of practice that can lead to future engineering students being better suited to the needs of industry.

It provides a model of practice that both the Faculty and engCETL can promote and is relevant to all departments and not just engineering.

Further information on this research can be obtained by contacting either Prof Andrew Dainty (a.r.j.dainty@lboro.ac.uk)
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Full details of the research findings and the list of references are available from http://www.engcetl.ac.uk/research/EI/

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Emotional Intelligence research project description

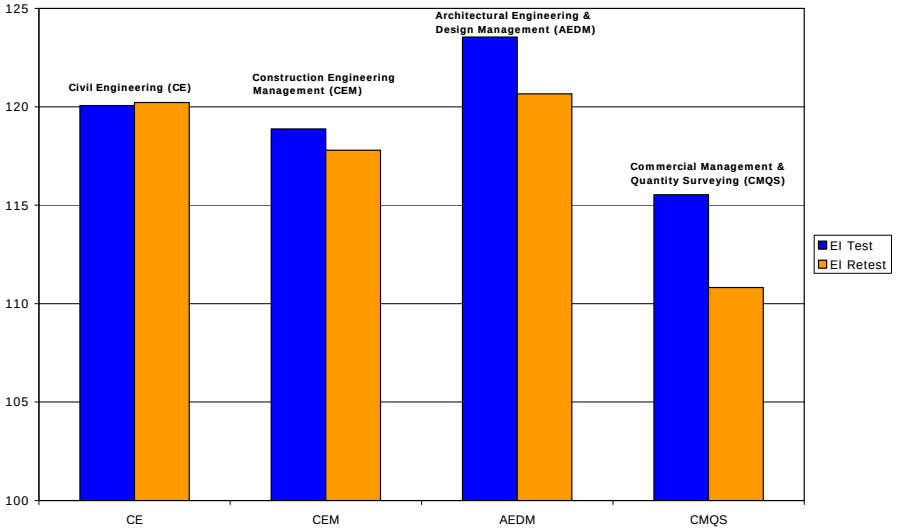
In this project we aimed to establish how different teaching and learning methods affected EI development amongst our undergraduates in order to find the best ways to enhance EI in the future. This research was funded by an Academic Practice Award, obtained in May 2006.

Methodology

Nearly 400 undergraduates from a range of engineering programmes took part in the study. Participants were given an EI assessment (SEI, Schutte et al., 1998) before and after the completion of a full academic year in order to establish how their EI changed in relation to their particular programme of study.

Key findings

Overall, EI score declined for most engineering programmes over the test-retest period. This suggests that the way in which we currently educate our students does little to enhance EI.



Interestingly, students studying on the Architectural Engineering & Design Management programme tended to have a higher EI score (M=122.3; S.D.=17.65) than those who had taken another programme (M=118.2; S.D.=14.65), whereas those studying on the Commercial Management & Quantity Surveying programme had lower EI (M=114.1; S.D.=17.52) than the average of the other programmes (M=120.4; S.D.=14.43). However, despite the differences between the cohorts, the ways in which we currently educate our engineering students appears to do little to support their EI development.

http://www.conovercompany.com/Products/EQProfile/EQProfile.htm

Teaching and learning strategies to enhance student's EI development

In light of the findings summarised above, the modular content of the programmes was further examined to identify the types of learning intervention that develop students' EI. Several teaching and learning activities were identified which appeared to positively influence EI development:

- **Student-centred learning** or open instruction (e.g., project-oriented work) was found to enhance learning by allowing students to regulate their cognitive and emotional process in learning (Giaconia and Hedges, 1982).
- **Role-play activities and real-world simulation** exercises allow students the opportunity not only to analyse, but also to experience and feel the principles, theories and concepts of negotiations (Reilly, 2005), helping them to understand both their emotions and those of others (Jaeger, 2003).
- **Peer assessment in team-based exercises** helps students identify their own strengths and weaknesses, target areas for remedial action, develop professional transferable skills, and enhance their reflective thinking and problem solving abilities during the learning experience (Sluijsmans et al., 1999; 2002 and Topping, 1998). Peer assessment is also found to improve students' interpersonal relationships, a key dimension of EI, in the classroom (Sluijsmans et al., 2002).

Case Example 1: Module CVA025 "Project and Teamwork"
Commercial Management and Quantity Surveying Programme

This module is based around a role-play exercise where each student takes on the role of a particular construction professional such as an architect, contractor or quantity surveyor. The module requires students to work effectively in a team and relies on a high level of communication. Through the social interactions that these changes enforce, students learn how to control their emotional expression and to better understand others' emotions.

Case Example 2: Module CVA012 "Architectural Drawing and Representation"
Architectural Engineering and Design Management Programme

This module is a design-based module which aims to teach students to produce their own drawing and to 'read' and interpret other's designs. By attending a series of studio sessions, students learn about how to produce and present their work in a way which is intelligible to a third party. These types of activities encourage emotional perception and understanding (see Mayer, 2000). Later in the module, students have to defend their work and give peer feedback to other students. This supports their abilities in providing constructive and appropriate feedback to their colleagues.