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Emotional intelligence is worth pursuing

» It is widely accepted that engineers need continuing technical training during their careers while they are doing work of a technical nature. Their initial technical qualifications need to be supplemented by additional training as they progress up the so-called technical ladder. But it is not nearly as widely understood that nontechnical training can have a significant effect on their performance at work, even if they are doing only technical work.

Advertising for financial investments often carries the warning: “Past performance is not an indication of future performance”. This is also true of job performance. Unless a new position is very similar to previous positions, the past performance of an individual is not indicative of his/her future performance. Hence the occasional validity of the Peter Principle: everyone rises in an organisation to his/her level of incompetence.

The success of any organisation depends critically on the performance of its personnel. Every individual has a level of potential competence which is determined by his/her cognitive capability (the ability to handle complexity of information) and emotional capability (the ability to remain emotionally coherent).

According to management guru Elliott Jaques, cognitive capability is dependent not on IQ but on the ability to think using one of four methods of mental processing: declarative, cumulative, serial and parallel. These are used in five different orders of information complexity: preverbal, concrete, symbolic, conceptual abstract and universal. These can be better described as the worlds of infants, children, most adults, very intelligent adults and geniuses, respectively. It seems doubtful that cognitive capability can be seriously increased through training, but training can significantly improve emotional capability.

Just as cognitive capability can be related to, but not defined by, IQ, emotional capability can be related to emotional intelligence (or EQ). Daniel Goleman built on the work of others to publicise the principles and application of emotional intelligence. Its elements are:

- Self-awareness* – The ability to recognise one’s moods, ambitions and drives, as well as their effect on others
- Self-regulation* – The ability to control or redirect disruptive impulses and moods; the propensity to suspend judgement – to think before acting
- Motivation* – A passion to work for reasons that go beyond money or status; a propensity to pursue goals

with energy and persistence

- Empathy* – The ability to understand the emotional makeup of other people; skill in treating people according to their emotional reactions
- Social skill* – Proficiency in managing relationships and building networks; an ability to find common ground and build rapport.

The concept of emotional intelligence is not new. Inscribed on the temple of Apollo at Delphi are the famous words in ancient Greek: *know thyself*.

Goleman’s research shows that the most effective leaders all have high emotional intelligence. They also have threshold levels of cognitive capability and technical skills, but Goleman found that emotional intelligence was twice as important as these other capabilities, for jobs at all levels. At high management levels, nearly 90% of the difference in leader effectiveness was attributable to emotional intelligence factors rather than cognitive abilities.

Cognitive and emotional capabilities determine the potential competence of every individual. Potential competence is a major influence on each person’s job performance capability, but other determining factors are the skills, knowledge and experience of the individual, his/her personal values and motivation, and wisdom and judgement. There are psychometric instruments available to measure an individual’s capability in some of these areas as well as his/her cognitive and emotional capabilities. Formal training related to these capability areas (except perhaps cognitive capability) will improve to varying degrees an individual’s understanding of the issues involved and hence his/her level of expertise in each area.

For example, it might be thought that an individual’s personality is unchangeable. In fact, the way people choose to operate as individuals may be unlikely to change, but an understanding of basic psychology can certainly assist engineers to understand themselves and others better. Myers Briggs theory, based on the lifelong work of the famous Swiss psychologist Carl Jung, is readily available and widely used to help people understand their own orientation to the external world, and how they make decisions. In particular, the theory covers people’s preferences:

- how much energy they get from themselves or others (the introvert/extrovert scale)
- how much they experience the current world in detail, or think about opportunities and principles in a more abstract way (sensing and facts versus ideas and opportunities)
- whether they make decisions logically or from personal

Job Performance Capability

Ability to perform against Objectives

Job Performance

Actual performance in the role

PHYSICAL FACTORS AT WORK:

- performance reviews
- quality of systems
- level of remuneration
- physical environment
- etc.

PERSONAL FACTORS OUTSIDE WORK:

- health
- non-work issues
- personal problems
- interest and motivation
- etc.

PEOPLE FACTORS AT WORK:

- organisation's culture
- organisation's values
- colleagues
- manager/subordinates
- etc.

Factors determining actual job performance.

values (thinking versus feeling), and

- how they plan and organise their own and others' lives (planning versus flexibility).

Furthermore, Myers Briggs theory directly impacts almost all areas of emotional intelligence, including self-awareness, self-regulation, empathy and social skill.

For an engineer, dealing with people is unavoidable. Understanding principles like those mentioned above can change the processes by which engineers live their lives and understand themselves and others. This will increase their emotional capability and in turn their job performance capability. Hence, engineers who have previously had little or no exposure to theories of intra- and inter-personal psychology will benefit considerably from increased knowledge in this area. This is at a time when the quality of engineers' relationships with their managers, subordinates, colleagues, customers and suppliers, not to mention families and friends, is at an increasingly high level of importance for their careers, and their personal satisfaction and happiness.

The actual performance of an individual at work depends not only on his/her performance capability, but also on many other factors. These can be categorised into work issues, both physical and people-related, and personal issues, as shown in the graph.

Just as it is in an employee's interest to minimise any negative effects on his/her performance at work from personal factors outside work, it is in an organisation's interest to optimise

the effect of the other factors which determine the actual performance of its personnel. While many organisations concentrate on the physical factors – key performance indicators, performance reviews, systems design and reliability, remuneration levels, office spacing and layout – they may not be so concerned about the people factors at work, eg organisational culture, values and leadership. They do so at their own risk. ■

This article is based on a paper "Engineers as managers and leaders" presented at the Leadership Conference in Sydney last September.