Using Ergonomics to Develop a Positive Safety Culture

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This paper describes the application of holistic ergonomics to help embed changes to the Health and Safety (H&S) systems managing risk at Griffith University (GU) in Brisbane. The focus was on identifying positive ways to make it easy for people to want to employ risk control measures, and to actually do so (Conic & Horrigan, 2001, Horrigan, et al., 2001). Also recognised in the current paper is recent research offering ergonomists a broader suite of tools to assist organisations to develop a Positive Safety Culture (PSC) (Whiting et al., 2014). These include Relationship Psychology (RP) and Complexity Management Theory (CMT) (Carillo, 2012), and social neuroscience (Elliott & Horrigan, 2015). While the change undertaken at GU applied some of the principles identified in this more recent research, the author notes that better H&S outcomes may have been achieved more efficiently had this research been available.

1. Background
Griffith University was originally created as a campus within a State Forest with dual degrees joining environmental science with more traditional disciplines such as Law, and developed into a more traditional multi-campus university competing with more established universities for funding, staff, students and prestige. GU’s risk profile encompassed the many diverse activities of a large university campus, as well as public presence and students in the workplace. The Heads of School (HOS) managed the funding and were academics who were appointed for a fixed 3-year period, a structural challenge to creating management engagement. The previously centralised H&S unit was embarking on a three year Health and Safety Management plan (HSMP). This included adopting a decentralised approach to H&S, a decision that had contributed to low morale among the unit, Workplace Health and Safety Officers (WHSOs), Rehabilitation Coordinators, and other safety stakeholders. The author was appointed as the Senior HR Advisor within the Office of Human Resource Management to help manage the structural change.

2. Process
The current state of the H&S system was reviewed by desktop audit. The HSMP was reviewed and established as the key performance and progress indicator. Existing lagging indicators were retained. The author became the visible symbol of safety via methods including: routine conversations with HOS and Element Directors, the Element and HR Advisor WHSOs, Rehabilitation Coordinators and other safety stakeholders; frequent positive publicity in the GU newsletter; and involvement in the ‘Making Griffith a Great Place to Work’ program. The author sought, and obtained, support for the change process from the OHRM and the senior executive of the university. Existing H&S committees changed their focus from hazards and claims to future needs. WHSO and Rehabilitation Coordinator Networks became revitalised focussing their meetings on sharing achievements, plans, strategies and good humour. Programs to help embed risk controls were also injected with a dose of humour. Adaptable highly visible signs in all buildings provided safety contacts. Safety information on the intranet was expanded, and made more interesting and engaging. The author gained the support of the Deputy Vice-Chancellor (Administration) to fund and personally open an internal one-day conference and annual Safety Network lunches for all the safety stakeholders to discuss and celebrate safety achievements.

3. Evidence of Successful Change
After three years the HSMP had exceeded expectations and the next plan was quickly produced and approved. Workers compensation claims and costs had been reduced. Anecdotally, the morale of the safety stakeholders was greatly increased. There had been one ‘left field’ incident of a member of the public breaking an ankle on the Gold Coast Campus. An injury to the public triggered a prosecution by the Division of WH&S at the time. An unexpected measure of success was receiving a fine at the lowest end of the scale.
due to the quality of the risk controls in place. Another unusual vote of confidence recognised the efforts of the H&S stakeholders. GU was changing to the ‘Peoplesoft’ Information Management System, and to reduce costs it had been decreed that university systems would change to fit into the computer system constraints, with one exception – the H&S Module. This module was modified at extra cost to make provision for reporting risk assessments, near misses, safety concerns, and safety ideas along with the traditional hazards and incidents. The interface for the reporting received an ergonomic makeover.

4. Additional Tools for Ergonomics

The change processes now employed by the author and Soteris to create PSC have built on the early principles of holistic ergonomics. There is now more focus on how to influence the behaviour of organisations and individuals through a greater understanding of neuroscience, complexity theory, and using conversations and active leadership to build relationships. For instance, Cooper (2010) found that the safety leadership of supervisors had a significant impact on the effect of behaviour-based safety. Hopkins (2002, 2012) promotes the value of mindfulness and management’s active presence on work sites. Elliott & Horrigan (2015) indicate that neuroscience, and in particular, social neuroscience, offers new insights for reducing risk and achieving a PSC. Carillo (2011, 2012) argues that because change is dynamic, static safety approaches or compliance-based cultures do not have an on-going effect on people’s safety priorities. Complexity management theory and RP indicate that people’s relationships and interactions with others are stronger predictors of safety behaviour.

Furthermore, Rock (2009) indicates that our brain treats social needs in the same way as our core basic needs to eat, drink and sleep. This means that if our brain interprets work relationships or the team environment as threatening, an avoidance response is triggered. Avoidance responses reduce our ability to pay attention, process information, make effective decisions, and accurately assess risk, thereby increasing safety risk. Conversely, positive relationships and team dynamics trigger what Rock calls an approach response. This encourages a sense of belonging, and a desire to “do the right thing” by colleagues, as well as better decision making, information processing, judgement and risk perception.

5. Conclusions

To improve safety outcomes, organisations need to actively facilitate positive work and team relationships, which maximise threat and minimise reward. Doing so will provide a strong foundation for developing and sustaining a positive safety culture. Ergonomics and ergonomists need to embrace these findings to help organisations to both minimize harm to their people and improve the effectiveness of their people. The GU change process occurred some years prior to the emergence in the literature of these new social neuroscience and relationship-based approaches to achieving positive safety outcomes. While the author applied robust change principles to maximize stakeholder engagement, participation and change readiness at the time, even better outcomes may have been achieved with the application of these more contemporary social and relationship-based approaches to achieving positive safety culture.

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References


