

How Effective Are The Efficiency Makers?

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Dr Claire Williams

(PhysOrg.com) -- In testing economic times every penny counts - so every business will surely strive for a healthy workforce and maximum productivity?

Factors such as staff suffering from [back pain](#) and upper limb pain (sometimes called RSI or repetitive strain injury) can reduce this productivity - so that is when organisations call in ergonomists to try and tackle the problem.

Ergonomics can be viewed as the study of people at work - with one of the goals of this study being to optimise their effectiveness. But what factors determine how effective the ergonomists themselves are in their

role?

That's the focus of research by University of Derby academic Dr Claire Williams, who herself worked in the industry for 14 years, offering consultancy and advice to a range of companies with workforce issues.

She said: "My academic background in science combined with my experience working in industry has given me a useful perspective about the ergonomics profession. When working with companies, I would spend time on the shop floor and work with staff and managers to identify the problems.

"It is so important to be able to interact effectively and communicate with people to build a rapport. Science is the bedrock of our profession but there are other factors to consider such as being able to relate to people. I believe having all of these qualities makes for the most effective ergonomist."

Claire has a degree in Biological Sciences and completed her doctorate in Ergonomics in 2008. She now teaches on the Masters in Ergonomics at the University of Derby, teaching the professionals of tomorrow.

She is about to publish her latest research study in the journal *Theoretical Issues in Ergonomic Science* about what ergonomists feel makes an effective practitioner in their field.

Her findings suggest that a good practitioner must be technically and scientifically sound, have good rapport and [communication skills](#) and be able to manage and deliver business proposals - to influence change in the organisation

Such qualities enable an ergonomist to visit a factory or business, quickly determine what the issues are, and make powerful business

recommendations to ensure the ideas are implemented for the benefit of the workforce - and the long-term economic benefit of the organisation. These skills need to form part of the education provided to ergonomists and these findings inform the Ergonomics programme provided at Derby.

As part of her teaching, Claire now draws on her experience of effective problem-solving for clients whilst working as an Ergonomics Consultant.

In one example, a food manufacturer contacted her complaining that eight to ten staff had developed pain in their upper arms. Dr Williams conducted a risk assessment to rule in and rule out risk factors and after consulting with staff determined there were a number of problems contributing to the pain.

These included a mixture of physical factors due to poor postures and high level of repetition and also to some psycho-social aspects of the workplace (e.g. pain reporting might not simply be due to physical risk factors, but can also be due to underlying issues such as changes to shift patterns or communication with managers and colleagues).

In this case, Dr Williams made business recommendations for change such as, rotating shifts and ensuring the job is varied - this was achieved by staff swapping sides on the production line from time to time and moving into other areas of the factory. The psychosocial issues were addressed by changing the isolated work patterns of those who missed the social interaction of the previous work set-up.

Dr Williams previously had another study co-authored with Professor Roger Haslam of Loughborough University and David Weiss from California State University published in Ergonomics journal in 2008. This work involved a survey of 200 people including students, nurses, physiotherapists and health and safety advisors who handle occupational

health and safety in the workplace.

She used psychological methods to determine if people had high levels of good judgement and consistency when judging ergonomics problems in workplace settings. These are features of expertise which ergonomists demonstrated over and above their other occupational health and safety colleagues, when dealing with the workplace scenarios in the study.

She hopes her published research will help ensure the professionals who enter this industry in the future are better trained and equipped with business, communication and persuasion skills as well as having the technical and scientific background to make a difference.

Provided by University of Derby

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