COBRA 2006

The construction and building research conference of the Royal Institution of Chartered Surveyors

RICS

University College London, 7-8 September 2006

UCL

COBRA 2006

PROCEEDINGS OF THE ANNUAL RESEARCH CONFERENCE OF THE ROYAL INSTITUTION OF CHARTERED SURVEYORS

Held on Thursday 7th and Friday 8th September 2006 at University College London

Joint Conference Directors
Stephen Brown
Stephen Pryke

Editor: Elaine Sivyer

Linking Human Resource Management and Knowledge Management for Performance Improvements: A Case Study Approach

A. Olomolaiye and C. Egbu

School of the Built and Natural Environment, Glasgow Caledonian University, G4 OBA, UK.

Knowledge management (KM), though still a relatively new area of research, has captured the attention of many management researchers and practitioners as the panacea for effective organisational performance. But the challenge posed by the reluctance of some key employees to share their tacit knowledge so as to facilitate organisational competitiveness remains very dominant. This has led to the disinclination of some construction organisations to fully embrace the implementation of KM initiatives. Most of the challenges of knowledge sharing have been attributed to the lack of involvement of human resource management (HRM) practices in most KM initiatives. This paper is based on an empirical investigation of knowledge sharing processes that incorporate HRM policy and practices in one international construction organisation with its headquarter in the United Kingdom. On the basis of the research, the paper highlights the need to develop a more critical and integrated view of KM and HRM issues for organisational performance improvements in construction. The results of this study, *inter alia*, show that the success or failure of any KM initiative lies, to a great extent, in the organisational capability to manage and motivate its employees, since people are at the heart of the KM philosophy. This paper concludes with recommendations that the primary focus of any organisation should be on establishing a culture that respects tacit knowledge, reinforces its sharing, retains its experts, and builds employees' loyalty to the organisation.

Keywords: human resource management, knowledge management, knowledge sharing.

INTRODUCTION

Recent survey of leading construction organisations in the UK show that 42% have started implementing KM (Robinson *et al.*, 2005. These results show that KM is becoming progressively more significant in the construction industry environment. Knowledge and its management defy easy description but the general consensus is that KM processes are much more human related. However, managing the resources of knowledge and people in construction organisations are both notoriously difficult tasks. This is because the construction industry is project oriented and people involved in projects are not only organisationally but also geographically dispersed.

As observed by Jyrki *et al.* (2003), projects are temporarily limited by time; the employees involved and the lessons learned are dispersed when the project ends, thereby leading to the loss of organisational memory and the 're-invention of the wheel'. While some of this knowledge can be captured into organisational databases, most of it remains in the head of employees as tacit knowledge. But when such tacit knowledge is shared, it becomes cumulative. This has led to the concept of "increasing

returns", as proposed by Arthur (1994), which challenges the traditional economical notion of "diminishing returns". In order to make this tacit knowledge available to the wider organisation, employees must be encouraged to share it with others. This would require networking and communication channels that encourage sharing and collaboration.

It has also been noted that the success or failure of any KM initiative rests more heavily on the organisational capability to manage and motivate its employees because people are at the heart of the knowledge management philosophy. According to Hislop (2003), the success of any knowledge sharing initiative is highly dependent on the employees' willingness to share their individual tacit knowledge. Employees' willingness towards knowledge sharing will be influenced by their perception of 'fairness', which is influenced by the organisation's HRM practices. Indeed the lack of awareness concerning links between KM and HRM in recent literature has been a surprising source of concern to researchers and practitioners, given the often discussed importance of people as the main resource for organisations (Hislop, 2003).

THE RELATIONSHIP BETWEEN KNOWLEDGE SHARING AND HUMAN RESOURCE MANAGEMENT

Storey (2001) defines knowledge sharing as the exchange of ideas and information between people who share a common purpose and have experienced similar problems. Knowledge sharing is a complex arena with a spectrum of 'soft' issues that must be considered. These 'soft' issues are sometimes difficult in a turbulent business environment like the construction industry.

Nevertheless the general consensus is that the co-ordination of a knowledge sharing implementation should be a human resource (HR) function. This view is also supported by the European Foundation of Quality Management (EFQM), as expressed in their revision of the business excellence model. The EFQM (1999) have aligned KM with people management, thereby suggesting a human resource management ownership and skills base. Bollinger and Smith (2001) observe that since the HR department is not competitive with other organisational functions and its responsibilities cut across all departmental boundaries, it is in a better position to encourage and implement knowledge sharing within the organisation. A seminal work by Greengard (1998) shows the HR department as being in an excellent position to promote a culture that supports KM by designing reward systems that nurture and encourage knowledge sharing, and educating employees about KM and its benefits.

Brauner and Becker (2006) are of the view that interpersonal relations among members of an organisation will be crucial for developing knowledge sharing systems focused on face-to-face interaction. This is because a co-operative and collegial setting promotes a knowledge sharing culture. Therefore a significant portion of HRM should be devoted to KM processes, especially knowledge sharing.

To do this effectively, Brauner and Becker (2006) suggest that the entire HRM process should be re-oriented towards improving organisational knowledge sharing. When knowledge sharing is included into job descriptions, employee selection, employee evaluation and employee training, extra effort for knowledge sharing would be minimal. Therefore, upon entrance into the organisation and following induction, HRM should support and encourage the integration of the new employee into the existing knowledge sharing system of the organisation. In particular, the training of new employees as well as current employees should focus on their development and integration into knowledge sharing systems.

RESEARCH METHODOLOGY

A qualitative approach was adopted for the study presented here. The study was based on a single case study, semi-structured interviews, the researcher's own on-site observations of the organisation and extensive access to secondary data. Semi-structured interviews were carried out with the most knowledgeable managers. To provide a managerial perspective as well as a holistic organisational perspective, the researcher formally interviewed thirteen top managers, who were allowed to express themselves and their experiences in their own terminology. Observations of site activities, meetings and individuals at work were also made throughout the study. The field notes from these observations and discussions with seven main suppliers of the organisation were used to verify or elaborate the interview data. In addition, access was gained to the organisation's intranet discussion forum. The archival materials from the intranet discussion forum show the high level of trust and a culture of 'no-blame', championed by the HR department, as the main reason for employees' willingness to share lessons learned from various global projects carried out by the organisation in the last few years.

CASE STUDY

BACKGROUND

The following is an analytically structured case study which highlights the interaction between the knowledge sharing initiatives and the overall HRM practices of an international construction organisation, subsequently referred to as Company 'A'. Company 'A' was founded in London in 1885 and has evolved into an international construction, house building, civil engineering and property conglomerate. It also ranks among the world's leading project and construction management companies. Through a process of recapitalisation, Company 'A' was bought over by an overseas company in 1999, but the registered head office has remained in London. Company 'A' has 7,500 employees worldwide and the organisation is one of the UK leaders for new work awarded, with projects worth almost £2 billion. Repeat business continues to constitute a large part of the order book. In the Middle East, the organisation is currently managing projects valued in excess of €3.5 billion.

The organisation's focus is to be a leading international retail and residential property group, integrated with strong investment management and construction management businesses. It is this strategy that underpinned the organisation's increased operating profit after tax of £119.6 million for the year to 30 June 2005. The organisation has been acknowledged for its fixed fee-based form of contract and strong belief in sharing its client's aspirations. The company operates in three geographic regions: the Americas, Asia Pacific and Europe. The result is a business with both global and local capabilities, and an international force in the construction market. Company 'A' has been involved in some of the world's landmark projects from Malaysia to USA. World-class project standards and cost savings goals of Company 'A' have been enhanced through strategic alliances formed with some of its key clients. Approximately 30% of the company's current and past clients are in the Fortune 500 list of the world's leading businesses. The organisation's customer relationships are built on trust, integrity and respect. The retention of these clients has been achieved by evaluating where Company 'A' can add value and tailoring a real estate solution to fit. To achieve this, Company 'A' encourages every employee to think beyond the immediate opportunity and more broadly than the standard product offering. The organisation is known to have pioneered different forms of contract such as construction management, and is currently a leading provider of Private Finance Initiative support in healthcare and education sectors within the UK. Today, Company 'A's business continues to grow in size and scope of services and knowledge.

DEVELOPMENT OF A CONDUCIVE WORKING ENVIRONMENT

Company 'A' is in good shape strategically and financially, and has a clear path for growth over the coming years. The organisation's confidence is based on the skills and sector knowledge of its employees, which have been honed over the past 30 years. The organisation is able to apply single or combine skills regionally or globally to provide a range of service solutions. These skills can be applied over a number of sectors due to employees' knowledge and experience. The organisation is able to offer a broad range of skills grouped into four main areas (construction, design/engineering, design management and procurement management) that can be tailored to match a client's specific requirements and opportunity, regardless of complexity (urban regeneration, telecommunications, sport and leisure, retail, residential, pharmaceutical, military, microelectronics, industrial, hotel, healthcare, education, commercial and cultural). Company 'A', placing great emphasis on communication with employees, has global reach and world-class local capability, delivered by employees dedicated to collaborating with stakeholders and working with integrity.

At Company 'A', business success is evaluated not only by financial measures, but also by the value attributed to organisational knowledge and emotional assets. These assets include employees' know-how and education, effective employee relations, and employee motivation, commitment and trust. Company 'A' recognises that successfully managing and leveraging its intellectual and emotional capital is directly aligned to its performance.

The organisation's human resource function encompasses development, performance management, reward and succession planning. Recently, Company 'A' has concentrated most of its human resource efforts on the recruitment and selection of highly experienced and skilful candidates, appropriate remuneration and reward for employees, and the selection and retention of key employees. These human resource practices are being championed by the Personnel and Organisation Committee (POC) in order to be able to realistically communicate to employees that they are the organisation's most valuable asset. This Committee focuses on the importance of human capital to the organisation's strategic and business planning. Company 'A' is also known to be actively involved in filling senior management vacancies through internal promotion. This has drastically increased the level of commitment shown by employees at different hierarchal levels within the organisation.

PARTNERING PROGRAMMES IN COMPANY 'A'

Employees see Company 'A' as a rewarding place to work. The organisation appreciates that most productive people enjoy a healthy balance in their lives with opportunities for personal growth, and also understands that there is more to life than just work. The organisation promotes opportunities to build trust and improve mutual understanding, shared values and behaviours through various programmes which can be categorised as follows:

- **Developing U**: this programme provides employees with learning and development opportunities well beyond the scope of normal business operations. One of the organisation's programmes - Springboard - brings employees at all levels together for a four-day conference on personal leadership and growth. Other examples include presentation skills training, personal interest courses and work/life balance seminars.

- **Business Partnerships**: this programme allows employees to engage with each other in a relaxed environment while learning more about business

developments in Company 'A'. This programme aims to foster lasting employee networks and includes the very popular NetworX in the UK.

- **Connections**: this programme is designed to build camaraderie and give employees and their families a broader sense of the organisation community. Examples include family days and movie nights.

The above named programmes are recognised as special to Company 'A' and represent its long-standing commitment to building and sustaining the social capital of the organisation's global community. Company 'A' encourages creativity and innovation in all its employees, who can expect to progress through a stimulating and rewarding career, and enjoy the diversity and variety integral to a global organisation that respects and values the contributions of people with differing skill sets, cultures and backgrounds.

TRANSFORMING HRM PRACTICES IN COMPANY 'A' FOR KNOWLEDGE SHARING

Company 'A' empowers its employees with responsibility and accountability. It offers a dynamic and supportive work environment as highlighted by its human resource management practices. Table 1 summarises the HRM practices that have contributed to the success of knowledge sharing initiative within Company 'A' and a detailed description is provided in this section of some of these HRM practices.

HRM Focus	HRM in Company 'A'
Recruitment and Selection	Identify, attract and sustain talent • Seek out high calibre talent • Focus on a flexible, agile workforce • Partner with external providers of knowledge
Performance Management	Monitor productivity and knowledge sharing • Manage outcomes characterised by knowledge sharing (rather than managing inputs and processes) • Retain skilled knowledge workers and key knowledge holders • Tap into knowledge workers' intrinsic motivations • Enhance individual/team collaboration through active knowledge sharing
Reward and Remuneration	Encourage acquisition, use and sharing of knowledge • Organisation philosophy based on rewarding those who assisted in wealth creation • Focused on both 'hard reward' and 'soft reward' systems • Combination of short and long- term incentives to motivate and retain high performing employees • Align key employees with the long-term interests of the organisation
Training and Development	Develop individual and organisational capability • Recognise the connection between organisational performance and knowledge sharing • Focus is on developing personalised work fulfilment • Identify and share excellent practices • Facilitate knowledge networks • Build organisational capability by facilitating knowledge sharing

Table 1: HRM Practices in Company 'A'.

RECRUITMENT AND SELECTION PRACTICE

Company 'A' employs candidates who possess both local knowledge of construction management practices and detailed knowledge of the organisation itself so that the organisation can meet the current and future needs of its clients. Company 'A' mainly recruits candidates through recruitment consultants/agencies and corporate websites (online recruitment). In the past, candidates were recruited informally by word of mouth, drawing upon employees' global networks of colleagues and contacts. In order to make the recruitment process more effective, the HR department developed a formal recruitment and selection policy with a focus on the process of recruiting knowledgeable workers and maintaining high retention rates across the organisation.

Based on the job and person specifications provided by the organisation, recruitment consultants/agencies supply shortlists of candidates on an ongoing basis. The organisation's policy for recruitment includes the following:

- Consideration of the desired competencies necessary to allow the organisation to discharge its responsibilities.
- Assessment of organisational size and composition, and the skills currently represented.
- Identification of skills not adequately represented and agreeing the process necessary to ensure candidates are selected who bring those skills.
- Engagement in a robust analysis of how employees' performances might be enhanced.

This policy, which is expected to serve as a guide, is implemented across the organisation's diverse project sites by project directors and managers who have the responsibilities of selecting and recruiting project members. A crucial issue for management in Company 'A' has always been in attracting and retaining a highly-skilled, expert workforce of international status in order for the firm to grow and successfully compete on a global basis. Infrequently, there have been instances whereby the organisation has had huge volume of construction works and the recruitment needs were not being met by the recruitment consultants/agencies. Such situations have warranted the organisation to supplement the efforts of the agencies by paid adverts.

As mentioned earlier, employees within the organisation are the first point of consideration in filling vacant management positions. It is only on rare occasions that 'outsiders' are brought in. This ensures that those who are currently in management positions fully understand the culture of the organisation. It also ensures that Company 'A' invests substantially in employees' career development.

One of the Directors commented that:

"We are looking for candidates who not only have got or can demonstrate a basic level of ability but what is more important is an attitude. The organisation wants someone who is self-motivated, someone who is prepared to learn and someone who is prepared to keep doing it better. We want people to be team players not Prima-Donnas. We need people who will respond to one another and support one another."

REWARD AND REMUNERATION PRACTICE

The founders of Company 'A' had a genuine desire to make a worthwhile and profitable contribution to society through everyday business activities. Principles such as wealth sharing, social change and building the community define its reputation and continue to guide the way the organisation does business around the world. In addition to

competitive salaries, Company 'A' offers its full and part-time employees a wide range of benefits and services.

The organisation has a philosophy that those who assist in the creation of its wealth should be amongst those who share the rewards. The sharing of wealth is achieved through programs such as: employee share plans, profit sharing, superannuation funds and many other lifestyle and learning opportunity benefits. As a global organisation, there are regional variations in these benefits, which can be subject to change from time to time. The organisation's remuneration and reward policy is determined and monitored by the Personnel and Organisation Committee. The policy rewards employees with market competitive benefits, taking into account both organisational and individual performance.

The approach of the organisation to employees' reward is to provide a balance of fixed and performance based cash elements. Employee's remuneration is also designed to be appropriate and competitive in each of Company 'A''s business locations, with regard to local practice on such issues as incentives, pensions, superannuation and other benefits. Company 'A' recognises the need to take into account the differing costs of living, and this is reflected in the rewards for its employees in the various project locations.

In addition, Company 'A' has in place Short-Term Incentive (STIs) and Long-Term Incentive (LTIs) plans for employees, with the emphasis on retaining key performing employees. Company 'A' believes that providing both short and long term incentives to employees who are outstanding performers is of immense benefit to the organisation and shareholders since such incentives are most likely to encourage these employees to share their knowledge and remain with the organisation. The STIs include employees' annual bonus payments which are based upon actual achievement measured against challenging financial, corporate and individual performance targets. Although the performance criteria are different for each employee, the principles are similar and involve the assessment of performance in achieving personal objectives related to specific business targets including profitability, quality of work executed, new work secured, health and safety, business growth and sometimes people development. Annual bonuses may be awarded in cash or awards under Employee Share Plans (ESP). Profit after tax is considered in setting the STI targets.

The objectives of the LTIs are essentially twofold: aligning key employees with the long-term interests of the organisation and its shareholders; and attracting and retaining employees of high calibre by providing competitive rewards that relate to the performance of both the individual employees and the organisation's share price. LTI grants are normally made in July each year and are based on competitive remuneration practice. The LTIs are in the form of a 'grant', which is notionally 'invested' over time to deliver value depending on if the employee remains with the organisation until the investment matures.

KNOWLEDGE SHARING IN COMPANY 'A'
Company 'A' is among the pioneers of a knowledge sharing service which provides employees with quick and direct access to the best available knowledge within the organisation, anywhere in the world. Company 'A' has been able to support the organisational workplace philosophy of sustained knowledge sharing by ensuring behaviours and collaboration that effectively share the intellect, insight and experience of the business with everyone in the organisation.

This knowledge sharing is aimed at improving organisational efficiency and client-focus. Company 'A' has realised that the ability to apply the best available knowledge is

a key point of difference in the marketplace. The knowledge sharing programme of the organisation is being achieved by investing in services that connect employees. This involves the use of a discussion forum that is a simple, global service which connects employees with a question, opportunity or challenge with someone with relevant skills and experiences for the purpose of sharing valuable insights. Company 'A' also sponsors Communities of Practice (CoP), providing technical skilling and maintaining systems.

The CoP programmes allow critical knowledge sharing and collaboration by bringing together groups of experts in specific areas from around the globe. The Technical Skilling programme provides cross-learning opportunities from experts in the field.

Finally, Company 'A' continues to improve and invest in various systems that support its business worldwide, thereby improving collaboration, reinforcing competitive advantage and allowing the organisation to capture efficiencies of scale. These include the database of research, written reports and knowledge networks across the organisation.

Company 'A' believes that success in the future will increasingly require all employees to share their knowledge with each other. However, there may be some challenges to this, as reflected in the views of one of the senior managers:

"Sharing knowledge can sometimes be difficult because there is a saying that "knowledge is power". Sometimes in this organisation you have employees who say, "Hang on, I know something and if I spread it around I am not going to be needed". Yes it happens but we have been able to reduce such occurrences by focusing on employees' needs. Within the last few years in this organisation we have developed a system of rewarding employees who readily share their knowledge. We have also developed a communication system that allows worldwide collaborations. This is the way it works - if an employee says, "Look I have got a problem, does anybody know anything about siphoning drainage?" The facilitator in our head office in London will spread the query worldwide via email. Then anybody that knows anything about siphoning drainage would reply and you get the information which should provide the solution."

Such knowledge sharing initiatives have benefited Company 'A' in so many ways, and through which the organisation also recently secured a multi-million pound museum project.

THE MUSEUM PROJECT – KEY BENEFIT
One of the benefits of HRM to improved knowledge management (KM) in Company 'A' is the recent award of a multi-million pound museum project in the Middle-East.

Company 'A' had earlier completed a museum in the UK where they acquired requisite experience of working with curators. There was a need to deliver the project within a short period of time, so Company 'A' embarked on phased completion of the projects such that as soon as an exhibition room was fully completed, it was pressurised and the workmen moved into the next exhibition room. This allowed the curators to bring their artefacts/exhibits into the pressurised exhibition room. This was an innovative process that was pioneered in the UK project. The pressure did not allow dust into the exhibition room, so by the time that Company 'A' had finally completed all the exhibition rooms, they were all dust free and sparkling clean. With this innovative process, Company 'A' was able to profitably complete the project on time and the quality of the project was exceptional.

A few months after the completion of this project, Company 'A' tendered for a multi-million pound museum project in the Middle East. The senior manager leading the tendering process sent out a query to the organisation through the knowledge forum asking for anyone who had experience of museum building. Following this, the Project Manager of the fully completed museum project in the UK sent him all the relevant information: what to do in terms of samples of work and how to co-ordinate the project activities with the curators in terms of filling their exhibit boxes earlier. In the main, most museums are built and finished before the curators come in to install their exhibits. Thus the knowledge sharing portal was useful in communicating the UK experiences with the team in Middle East, so that they could be used for presentation to their client.

One notable fact about the winning of this bid is the way the Project Manager in the UK was able to share his experience; he knew that the success of any project benefits all employees within the organisation based on the Long Term Incentive (LTI) plan. He was also rewarded with recognition by other colleagues and seen as an expert in his field in the organisation. This high level of regard and trust has been strengthened by a recent situation where two senior managers retired. Both of these managers have now been made lifetime consultants to Company 'A'; so to all intent and purposes, they have retired and have collected their pensions but are now operating within the company as consultants. Their roles are to look after some key clients, and facilitate between the client and the new employees who are coming up to take on what they used to do. These managers are still able to share their tacit knowledge with others in the organisation. When other employees see the way Company 'A' is treating knowledgeable employees, they are also eager to share their knowledge. Therefore Company 'A' will still be able to depend on this Project Manager with expertise in museum projects even in his retirement days. This is a kind of lifetime reward as a result of the knowledge sharing process linked to HRM practices.

CONCLUSION

The process by which construction organisations manage, develop and release the knowledge and full potential of their employees greatly depends on the HRM practices within the organisation.

Company 'A' recognised that it is the employees within its organisation that are the key contributors to its knowledge sharing success. Vast savings have been recorded by Company 'A' through exchanges of tacit knowledge. The key to success is the implementation of a fair system of people management. Company 'A' places emphasis on recruiting candidates with the right knowledge who would be ready to share it.

However, integrating HRM practices into knowledge sharing initiatives is not without its own challenges, especially securing buy-in from employees who want to be re-assured that such 'good treatment' is not a management gimmick to codify their knowledge with the intention of laying them off. When Company 'A' started its knowledge sharing initiative, the problems of obtaining employees' trust, commitment and motivation became apparent. In solving these problems, Company 'A' started developing a culture which supports and promotes knowledge sharing through its integration of HRM practices into the knowledge sharing initiatives. Company 'A' started highlighting situations where employees have had positive experiences from knowledge sharing and this further influenced employees' attitudes towards the values of the organisation.

The primary focus of Company 'A' has been on establishing a culture that respects tacit knowledge, reinforces its sharing, retains its experts, and builds employees' loyalty to the organisation. In implementing their knowledge sharing initiative, Company 'A'

ensured that the initiative was clearly defined by senior management and was well understood throughout the organisation. This knowledge sharing initiative was made to align with the organisation's HRM practices.

Recently, there has been the suggestion that the reward and recognition systems in the construction industry should be improved to meet the expectations of skilful and knowledgeable employees. It was also recognised that there is no organisation that can adequately reward knowledge sharing; the main reward is the self-satisfaction that comes from the fact that the employee is impacting his/her knowledge onto others and developing the organisation. Knowledge sharing helps employees feel good if they know that they have helped someone. Motivation not only comes from the wage packet but also through recognition of individual contributions. It might also be helpful to ensure that all further career steps depend on employees' knowledge sharing activities. This implies that employees' role in knowledge sharing could become a key consideration in their performance measurements.

Furthermore, formal mechanisms should be put in place to survey employees' encouragement and satisfaction regarding knowledge sharing on a regular basis, and results should be tracked over time. If employees can see that they make a difference, then they feel part ownership of the organisation's successes.

REFERENCES

Arthur, D. (1994), *Increasing Returns and Path Dependence in the Economy*, University of Michigan Press, Michigan.

Bollinger, A. S. and Smith, R. D. (2001), "Managing organisational knowledge as a strategic asset", *Journal of Knowledge Management*, 5(1), 8-18.

Brauner, E. and Becker, A. (2006), "Beyond knowledge sharing: the management of transactive knowledge systems", *Knowledge and Process Management*, 13(1), 62-71.

European Foundation for Quality Management (1999), "Essentials of excellence: the fundamental concepts and their benefits"*,* EFQM, Brussels.

Greengard. S. (1998), "Storing, shaping and sharing collective wisdom", *Workforce*, 77(10), 82-87.

Hislop, D. (2003), "Linking human resource management and knowledge management via commitment", *Employee Relations*, 25(2), 182-202.

Jyrki, J. J., Vartiainen, M. and Hailikari, M. (2003), "Managing knowledge and knowledge competences in projects and project organisations", *International Journal of Project Management*, 21, 571-582.

Robinson, H. S., Carrillo, P. M., Anumba, C. J. and Al-Ghassani, A. M. (2005), "Knowledge management practices in large construction organisations", *Engineering, Construction and Architectural Management*, 12(5), 431-445.

Storey, J. (2001), *Human Resource Management: A Critical Text*, Thomson Learning, London.