INVESTIGATING GOOD HEALTH AND SAFETY PRACTICES IN SMALL CONSTRUCTION FIRMS IN THE UNITED KINGDOM

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Increasing attention on Health and Safety has been imposed upon workers in small construction firms in recent years as there is a continuous strive for the safety of workers in the construction industry. Policy and procedures have been the main focus of many initiatives but the practices of construction workers on site have been reported to differ from the safety policies which are sometimes constructed only as a 'bureaucratic' requirement. Research suggests that workers in the construction industry would rather apply a common sense approach to their health and safety practices which they believe leads to *good* health and safety practices and hence safety of the workers. A recent PhD research project set out to explore these good health and safety practices of workers of small construction firms in-depth and critically review their relationship to health and safety policy. This paper discusses the rationale and research methodology for the project: data will be collected via semi-structured interviews and non-participant observations to form case studies of different firms operating on site in the East Midlands region of the United Kingdom. The East Midlands is a particularly attractive location for a study of good practice as health and safety records show a steady decline in accidents and injuries in the past decade. The research is being conducted with a qualitative approach to gain rich data on site practices and workers perceptions. Thus, the research will offer in-depth information on local conditions under which 'good practices' are carried out in ensuring the health and safety of small construction firm workers.

Keywords: health and safety, policy, qualitative research, small firms, site practice.

INTRODUCTION

Health and Safety awareness continues to be advocated due to the potential risks and dangers the construction industry possesses. The health and safety issues that are discussed in construction do not only cover the workers on a given project or site but also covers all stakeholders including clients, investors and even passers-by (HASAW, 1974). The Health and Safety at Work Act 1974 states that designers and manufactures of a given project must demonstrate reasonably practicable effort in identifying and eliminating risks. Reasonably practicable in the context of the act refers to the weighing of a risk against the trouble, time and money needed to control it. That is, the risk is managed to a level whereby health and safety inspectors deem the given workplace as having its risks controlled (HSE, 2001).

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The construction industry is one of the major employing sectors in the United Kingdom and also one of the most dangerous workplaces in comparison to other industries (Reynolds *et al.*, 2008). These reasons rationalize the high level of scrutiny that is involved when matters of the industry are being discussed (HSE, 2010). Practices of construction firms with regards to matters such as health and safety have been found to vary with regards to organisational structures and the size of the firm (Lingard and Holmes, 2001). Relatively smaller firms and projects may not require the types of procedures and practices in place in large organisations as long as the firm's operatives incorporate measures that will ensure safe working conditions (HSE, 2010).

This research (PhD study in its second year) focuses on the *good* practices that small construction firms undertake in order to keep work environments safe for their workers. Some of these practices in question cover areas such as risk identification, risk assessment, risk management, communication on site, safety equipment and employee training. The practices mentioned above significantly determine a given site's safety as far as they are carried out effectively (Sawacha *et al*, 1999). However, safety in the construction industry would fail if the behavioural, environmental, organisational and individual factors are not incorporated into safety practices appropriately (Ho and Zeta, 2004). In other words, several elements determine safety performance in the construction industry. In light of this, the aim of this study is to acquire a comprehensive understanding of the safety practices of the small construction firms in the East Midlands region through the proposed empirical study.

The following sections of this paper introduce the research aim, objectives and methodology before a literature review that discusses organisational cultures, safety cultures and selected practices of small construction firms with respect to health and safety on construction sites. The final section of the paper is the conclusion.

RESEARCH AIM, OBJECTIVES AND METHODOLGY

The main aim of the research is to critically examine the *good* practices carried out by small construction firms with regards to health and safety. The focus on good practices will shed light on the decline of accident and injury occurrences in the industry in the East Midlands region (HSE, 2010).

The research objectives are as follows:

- To explore the informal ways of managing health and safety in small construction firms

- To critically evaluate the effectiveness of informal practices in managing health and safety

- To identify and assess the role of the health and safety assessors in risk management – informal or otherwise

In order to achieve the above aim and objectives, it is imperative that the research considers features that are unique to the health and safety practices of small and medium-size enterprises (SME) in construction (e.g. leadership and management techniques, communication methods and risk management as discussed later in this paper under literature review). In-depth literature review was used to inform the research before the commencement of a pilot study as part of the data collection. After data collection, the analysed information will be used to inform the research about further themes and vice-versa. Currently, the researcher is conducting in-depth literature review alongside data collection (presently at the pilot study phase).

Methodology

A qualitative methodological approach is adopted for the study, as the research seeks out rich data from a relatively small sample (Fisher, 2004). An interpretivist ideology will be adopted in data analysis. This ideology will enable the study to give a voice to the data and the research participants. Ideally, collection of rich data (especially in the construction industry) will require direct contact with operatives on the sites (Pink *et al.*, 2010). Thus, the research proposes to conduct four case studies of four construction sites in the East Midlands region. The region has been chosen for the research because of a steady decline site accidents and injuries in the past decade (HSE, 2010). The research will focus on small construction projects (workforce of less than 20) with simple organisational structures in order to uncover how they operate and how interactions are established amongst workers as far as health and safety practices are concerned.

The research methods employed include semi-structured interviews and non-participant observations. Five workers from each construction site will be interviewed. Interviewees will include firm owners and site operatives. Non-participant observations will be carried out on all four construction sites with great care and aim for minimal researcher influence. This approach will offer the direct contact that is required to obtain in-depth information from the workers construction firms (Pink *et al*, 2010). Furthermore, the non-participant observation will reveal hidden or unconscious practices that may not have been discussed or mentioned during the interviews or practices that cannot be uncovered through questionnaires.

Following the data collection, a thorough thematic coding of the information (transcribed interview data and field notes from observations) will be carried both manually and with the assistance of QSR NVivo. The software has been chosen as it will help facilitate the coding process and help the researcher draw out patterns and refine the research ideas. Also, NVivo and similar software provide a considerable potential to give unprecedented levels of transparency within qualitative research by laying out the data and showing any manipulations that a researcher may have done to it (Johnston, 2006). Hence, the transparency of the software will enable supervisors and examiners to view not only the data, but also assists in tracking the processes involved in the whole research journey (such as coding structures, reviewing links and annotations and examining the research journal).

ORGANISATIONAL CULTURE

Organisational culture can be described as a set of principles and norms that people and groups in organisations share (Hofstede 2001: 391). These sets of principles and norms influence how individuals interact with each other. Different groups and organisations possess different cultures even when compared to other groups of similar operations and activities (Schein, 2010). Several concepts contribute to the formation of an organisational culture and these are: official, unofficial, structure, values, sub-cultures and cultural imperialism (ibid). The official aspects of an organisation are those that are written and approved or published by the top management of the organisation (Parker, 2003: 32). In contrast, the unofficial aspects refer to the values, ideas and behaviours practised amongst staff. The structure in terms of organisational culture covers technologies, procedures, policies and charts that define the formation of the organisation (ibid). Values are the firm's beliefs about right and wrong as well as the proper and improper ways of undertaking activities according to the organisation. Values can be held by individuals as well as collectively

(Hofstede 2001: 5). According to the definition of culture, it is likely that within an organisational culture, there are will be sub-cultures which may be unique to specific groups or individuals. In addition, some cultures may be more '*low-key*' than others even though they are also considerably influential in the shaping of the firms overall culture.

Table.1 A conceptual framework for organisational culture (Fisher, 2004: 114)

	Structure	Values
Official	Mission statements, policies, objectives, organisation, charts, manuals, job descriptions	Senior managers' ideas, views and visions
Unofficial	The way in which people in the organisation do things	The ideas, values and opinions of everyone else in the organisation

From the table above, it is evident that different parts of an organisation's cultures result in significant differences in the firm's overall culture. Small construction firms tend to demonstrate unofficial structures and values as informal practices are valued in their interactions (Mohamed, 2002).

Organisational culture is multi-faceted and as such the organisational culture of a construction firm must not be viewed as a homogenous entity (Dainty *et al,* 2007). The size of firms, technologies employed, objectives of the firm, nature of projects as well as some external factors (e.g. industry policies and practices) all determine the practices and cultures of small construction firms and hence the difference from large firms (Reynolds *et al*, 2008). Small construction firm operatives usually have different views and approaches from large organisations with respect to how they go about their activities with respect to health and safety training, health and safety risk identification, site organisation and even safety equipment usage (ibid). It is important to understand these in-depth since majority of businesses in the construction industry fall under the small and medium-sized enterprise category; an overwhelming 95% of the industry's firms employ fewer than 13 people (Edwards, 2011).

The size of small firms is an important variable in determining their identity. There are different categories of small construction firms as they offer a wide range of services (such as specialist or trade services, or main contracting on small projects) (Holmes *et al.*, 1999). The owner of a small construction firm may operate on site as a superintendent or a fellow worker and as such, the owner will be in a position to directly translate his/her personal philosophy into practice (Hinze, 2004). Leaders' demonstration of good practices on site (e.g. effective risk assessment) influences workers perceptions of ideal practices and as such discourages subordinates from doing the contrary (Langford *et al.*, 2000).

Operatives that work for owners of small firms that show initiative with respect to good safety practices (e.g. providing effective safety equipment and safety training) believe that risk and accidents can be minimised if not eliminated by good practice, while workers of organisations that do not encourage good practices learn to believe that risks and accidents are part of the job (Holmes *et al.,* 1999).

Unlike large organisations whereby decisions are taken by different people, small organisations' decisions are usually taken by the owner and once again, his/her views determine that of the organisation (Ruben and Hinze, 2008). Furthermore, small construction firms usually have flat structures with respect to leadership and hierarchy and this has some advantages, such as effective communication amongst workers and supervisors (March, 2009). In consideration of the above, the research will investigate

whether the flat structure of small construction firms enables that messages amongst workers and leaders are delivered efficiently (i.e. on time and without ambiguity). The next section looks at the safety culture in the construction industry from different points of views: the HSE, small construction firms and individual workers (Gillen *et al.*, 2004).

Safety culture

An organisation's safety culture is a result of individual and group values, attitudes, perceptions, competencies and certain sets of behaviour that determine the organisations approach and commitment to health and safety management (Wamuziri 2006). The HSE states that "*Organisations with a positive safety culture are characterised by communications founded on mutual trust, by shared perceptions of the importance of safety and by confidence in the efficacy of preventive measures*" (HSE, 1999: 45). In other words, effective communication is key in the building of a good safety culture. Furthermore, the communication will only be effective if workers have a mutual trust and possess similar priorities with respect to safety practices.

Construction sites possess a great deal of fluidity; many workers report on site at irregular periods depending on reasons such as their tasks, their availability and when they may be required (Dainty *et al*, 2007). Hartley and Cheyne (2009) clarify that even though there may be a core organisational culture for a particular firm, site activities may involve the use of other workers such as specialist subcontractors and hence the site's safety culture becomes a blend of cultures consisting of the organisations in question and cultures of the joining worker(s). Hartley and Cheyne (2009) stress that there are numerous factors that determine a construction firms' safety culture and oppose Chinda and Mohamed's (2008) discussion that there is a set number of determinants that define the safety culture of a given construction firm. There is no specific or set number of determinants that can define the safety culture of a construction firm due to the different procedures undertaken for each project and the different sites that these procedures are carried out on. In other words, every site or project has different factors that affect the safety culture a given firm. To add to how dynamic the safety cultures in construction are, Dainty *et al* (2007) and Pink *et al* (2010) all explain that the teams that work on a given project (i.e. from different firms) may have never worked before and may never work again. Considering the constantly changing workforce or teams on construction sites, it is logical to suggest that the flexibility in safety cultures allows the small construction firms to accommodate others as well as their way of carrying out activities and projects. The above statement will be investigated as one of themes of the study during the data collection and analysis stages of the research.

Trust among workers has been found to be imperative in the building of a good safety culture. "*Trust is often presented as a state in which one person (trustor) chooses to rely on another person (trustee) in a risky situation based upon positive expectations of the trustee's behaviour or intentions*" (Conchie and Burns 2009: 14). Considering the above definition, small construction firms will be conducive for such relationships due to their size, structure and activities undertaken by the organisations (Wamuziri, 2006). Supportive work environments demonstrate that workers have genuine concern for safety and this improves the ties between co-workers (Mohamed, 2002). Trust among construction workers is associated with effective communication, reduced risk perception as well as effective risk management (Conchie and Burns, 2009); as identified above, all factors necessary for

good practice health and safety. It is argued that the higher the level of support given by co-workers, the better the safety culture of the organisation (Mohamed, 2002). This research will test Mohamed's (2002) hypothesis in order to determine whether the level of support from co-workers improves the safety culture of the organisations that have been chosen for the case studies.

HEALTH AND SAFETY PRACTICES

As identified above, construction projects and sites usually have numerous ongoing activities and practices at every point in time. Management of health and safety on site includes the management and leadership of workers, the learning and training of workers, modes of communication and interaction amongst personnel on site and risk management techniques. "*A safe working practice is produced by engineering heterogeneous elements – knowledge, materials, relations, communications and so on – within a community of practice*" (Gherardi *et al* 1998: 204).

Small construction firms have 'non-complex' practices with respect to knowledge transfer, site communications, application of local knowledge, establishing the safe conditions for work, risk management and employee interactions (Pink *et al*, 2010). When matters of the health and safety of workers are discussed, it becomes evident that practices of organisations overlap (Lingard *et al*, 2011). A typical example would be how leadership skills would play a major role in the training of new workers with regards to safety practices. Construction site inspections, incident investigations, pre-task planning as well as worker orientation have been found to be conducted with local knowledge and less complexities in small construction firms (Ruben and Hinze, 2008). Furthermore, all small construction firms that undertake the above practices effectively have been known to have a good safety culture (Ruben and Hinze, 2008). Amongst small construction firm workers, safety gear usage may only be required with consideration of specific tasks to be undertaken. For example, workers on projects whereby there is no likelihood of items falling from above may not be required to wear hard hats (Ruben and Hinze, 2008). Some of these behaviours and practices can be attributed to what workers have learnt or have been trained to do.

The next section discusses learning and training in small construction firms.

Learning and Training

As mentioned earlier, local knowledge plays an essential role in the activities of small construction firms. This local knowledge can cover technical know-how, practices and even the values of workers and as such the transfer of this knowledge is important in small construction firms (Sillitoe, 2002). There is a strong link between safety training and a reduction of injuries and accidents on sites and consequently leading to safer practices (Lingard and Holmes, 2001). Training of workers on how to use safety equipment and kit effectively makes a crucial impact of the safety performance on sites (Langford *et al,* 2000; Sawacha *et al*, 1999). How this local knowledge (especially health and safety related) is passed on from experienced workers to other workers is therefore important to the industry. Training of workers can take many different forms but on construction sites is usually delivered 'on-the–job' through demonstration and practice (Gherardi and Nicolini, 2002). As far as small construction firms are concerned, not all sites or projects require an orientation process and a pre-task planning stage (Ruben and Hinze, 2008); health and safety practice that serves as an opportunity for more experienced and conversant workers to teach less experienced workers the local ways. Good workers in small construction firms admit that further

safety training is always important as it helps improve upon safety awareness and helps workers to stay focused (Reynolds *et al*, 2008).

The experienced workers and the managers/owners of small firms tend to act as teachers and trainers for less experienced workers. By so doing, these individuals assume the positions of leaders in the firms. Considering the above, it can be deduced that leadership and management are important aspects of health and safety training in small construction firms and as such need considerable attention, thus this has been included as another area for investigation within the empirical work. The following section will review leadership and management of health and safety in small construction firms.

Leadership and Management

Effective leadership results in positive health and safety outcomes in small construction firms (Ruben and Hinze, 2008). The role of managers and leaders in ensuring the safety of workers goes beyond organising and providing safety measures and working instructions (Mohamed, 2002). They also act as exemplary figures that motivate other workers to work safely and hence generating an overall safety culture. Langford *et al* (2002) add that when employees believe that the managers and leaders care about their personal safety, they are more willing to cooperate to improve safety performance. With that said, it can be agreed that the role of leaders and managers with respect to health and safety is crucial and hence cannot be overemphasized. Relationship-oriented leaders are more likely to yield safer working environments (Langford *et al*, 2000). Gillen *et al* (2004) also discovered that team leaders felt like 'heroes' when they were able to protect their team members through effective safety management measures. Also, in small construction projects, informal practices may be allowed by leaders and managers as long as these practices do not affect the project adversely (e.g. preventing project completion on time or making the project unsafe) (Gillen *et al*, 2004). An example of the such informal practice was discovered in a study whereby site leaders allowed workers to use mobile phones while on site as long as they did not compromise the safety of the site hence leaving the decision to the discretion of the workers themselves (ibid). The researcher will investigate whether practices of leaders leaving decisions to the discretion of the workers helps improve good safety practices or otherwise.

Communication

Bust *et al* (2008) stress on the importance of communication in construction safety considering the tasks involved in construction and the fluidity of happenings on projects and sites. The fluidity of happenings on sites can hinder the development of effective communication on a site if not handled appropriately as some workers may not be aware of specific risks, dangers or new procedures being implemented. Hence, modified communication forms may be developed with hope of keeping all workers on site informed at all times. Communication can take many forms, such as verbal (what is said), paraverbal (how it is said), non-verbal (body language) and/ or actions (the way things are done- consciously or unconsciously) (Bust *et al* 2008: 586).

Due to the familiarity of workers with each other in small construction firms, it has been argued that workers may know what their colleagues mean by their statements, phrases and gestures even if there are no spoken words (Bust *et al*, 2008). Formal feedback systems may not be required in small construction projects as the channel of communication is not complex and as such, concerns can be raised immediately after messages are delivered. It crucial that there are no problems with communications on

site as issues with communications have been found to contribute to the increase of accidents on sites of large construction firms (HSE, 2003). It is stated that: "*The inability to immediately communicate via the spoken word on construction sites represents on of the major barriers to successful management of health and safety*" (Bust *et al* 2008, p. 587). Considering the above statement, the researcher will investigate whether workers of small construction firms are able to manage health and safety more effectively due to the prevalence of direct communication and if so, whether this is as a result of the organisations' simple structures and the nature of interactions on such sites.

CONCLUSION

This research is investigating good health and safety practices amongst workers of small construction firms. Health and safety matters with workers of small construction firms have been found to be highly reliant on the safety culture that is developed by the workers with influence from the owners/leaders. Workers of small construction firms in the United Kingdom make up a significant majority of the workforce of the industry and as such their safety practices very much represent the practices of the sector and hence the importance of the sector's health and safety issues cannot be overlooked.

Literature reveals that small construction firms possess different organisational cultures when compared to large firms. Some of the differences can be found in the safety cultures and health and safety practices. The themes that the researcher is investigating for this study include: learning and training, management and leadership and communication practices on sites as these have been found to be important with respect to the health and safety practices of small construction firms.

Also, after consulting literature, the researcher found that workers of small construction firms prefer to train workers on site as it is believed that the local knowledge of the industry is best learnt on site through demonstration. In addition, the managers and leaders' attitude towards good health and safety practices is reflected on the overall safety culture of the organisation. Similarly, communication is an invaluable asset for every project as it is an effective tool of managing risk. In addition, communication among the workers of small construction firms take different forms such as verbal or gestural. In addition, trust is key in the building of safety cultures for small construction firms.

A case study approach is being adopted for this study as it will enable the research gain a holistic understanding on health and safety practices undertaken by selected small construction firms.

This research seeks to provide both industry practitioners and the academic community with in-depth information about the safety practices that are undertaken in small construction projects.

REFERENCES

Bust, P.D., Gibb, A.G.F. and Pink, S. (2008), "Managing construction health and safety: Migrant Workers and Communicating Safety Messages", *Safety Science*, **46** (4), 585-602.

Chinda, T., and Mohamed, S. (2008), "Structural Equation Model of Construction Safety Culture", *Engineering, Construction and Architectural Management*, **15** (2), 114-131.

Conchie, S. and Burns, C. (2009), "Improving Occupational Safety: Using a Trusted Information Source to Communicate Risk", *Journal of Risk Research*, **12**(1), 13-25.

Dainty, A., Green, S., Bagihole, B. (2007), "People and Culture in Construction", *People and Culture in Construction*, 3–25.

Edwards, N. (2011), "SME Special: The Cogs that Drive the Industry", *Construction News*, **24**, 27 February 2011.

Fisher, C. (2004), *Researching and Writing a Dissertation for Business Students*, Financial Times, New Jersey, USA.

Gherardi, S., Nicolini, D. and Odella, F. (1998), "What Do You Mean by Safety? Conflicting Perspectives on Accident Causation and Safety Management in a Construction Firm", *Journal of Contingencies and Crisis Management*, **6** (4), 202-213.

Gillen, M., Kools, S., Sum, J., McCall, C. and Moulden, K. (2004), "Construction Workers Perceptions of Management Safety Practices: A Qualitative Investigation", *Work*, **23**(3), 245-256.

Hartley, R. and Cheyne, A. (2010), "At First Sight: Impressions of Safety Culture on Construction Sites", in: Egbu, C. and Lou, E.C.W. (Eds.), *Procs 26th Annual ARCOM Conference*, 6-8 September 2010, Leeds, UK, Association of Researchers in Construction Management, 213-222.

Health and Safety Executive (1999), *Reducing Error and Influencing Behaviour,* HSG48, UK.

Health and Safety Executives (2001), *Reducing Risks, Protecting People: HSE's Decision-making Process*, Norwich, UK.

Health and Safety Executives (2010), *Safety Initiative Targets Region's Small Construction Sites*, http://www.hse.gov.uk/press/2010/coi-nw-14constructionsafety.htm [Date accessed 20 February 2011].

Hinze, J. (2004), *Construction Planning and Scheduling,* 2nd Edition, Prentice Hall, New Jersey, USA.

Ho, J.K.L. and Zeta, K.C. (2004), *Cultural Factors and their Significance to the Hong Kong Construction Industry,* http://www.ic.polyu.edu.hk/oess/POSH/conferences/ANZAOHSE/ANZAOHSEProceedings/Hyperlinks/Full%20Proceedings/Ho%20and%20Zeta.PDF [Date accessed 4 April 2011].

Hofstede, G. (2001), *Culture's Consequences,* 2nd Edition, Sage, London, UK.

Holmes, N., Lingard, H., Yesilyurt, Z. and De Munk, F. (1999), "An Exploratory Study of Meanings of Risk Control for Long Term and Acute Effect Occupational Health and Safety Risks in Small Business Construction Firms", *Journal of Safety Research*, **30**(4), 251-261.

Huang, X. and Hinze, J. (2006), "Owner's Role in Construction Safety", *Journal of Construction Engineering and Management*, **132**, 164.

Johnston, L. (2006), "Software and Method: Reflections on Teaching and Using QSR NVivo in Doctoral Research", *International Journal of Social Research Methodology*, **95**, 379-391.

Khalfan, M., McDermott, P. and Swan, W. (2007), "Building Trust in Construction Projects", *Supply Chain Management: An International Journal*, **12** (6), 385-391.

Langford, D., Rowlinson, S. and Sawacha, E. (2000), "Safety Behaviour and Safety Management: Its Influence on the Attitudes of Workers in the UK Construction Industry", *Engineering Construction and Architectural Management*, **7** (2), 133-140.

Lingard, H., and Holmes, N. (2001), "Understandings of Occupational Health and Safety Risk Control in Small Business Construction Firms: Barriers to Implementing Technological Controls", *Construction Management and Economics*, **19** (2), 217-226.

Lingard, H., Cooke, T. and Blismas, N. (2011), "Coworkers' Response to Occupational Health and Safety: An Overlooked Dimension of Group-level Safety Climate in the Construction Industry?", *Engineering, Construction and Architectural Management*, **18** (2), 159-175.

Maloney, W.F. (2003), "Reciprocal Model of Construction Safety Culture", in: Bontempi, F. (Ed), *System-based vision for Strategic and Creative Design*, 23-26 September 2003, Rome, International Structural Engineering and Construction Conference, 397-402.

March, C. (2009), *Operations Management for Construction*, Taylor and Francis, London, UK.

Mohamed, S. (2002), "Safety Climate in Construction Site Environments", *Journal of Construction Engineering and Management*, **128** (5), 375-384.

Parker, M. (2003), *Organisational Culture and Identity: Unity and Division at Work*, Sage, London, UK.

Pink, S., Tutt, D., Dainty, A. and Gibb, A. (2010), "Ethnographic Methodologies for Construction Research: Knowing, Practice and Interventions", *Building Research and Information*, **38** (6), 647-659.

Reynolds, J.H., Tutesigensi, A. and Lindsell, D.J. (2008), "An Evaluation of Health and Safety Management in Small Construction Enterprises in the UK", in Hinze, J. (Ed), *Procs CIB W99 International Conference*, 9-11 March 2008, Gainesville Florida, 14th Rinker International Conference, 541-550.

Ruben, M., Hinze, J. and Feronti, T. (2008), "Safety Practices of Small Construction Contractors", in Hinze, J. (Ed), *Procs CIB W99 International Conference*, 9-11 March 2008, Gainesville Florida, 14th Rinker International Conference, 649-658.

Sawacha, E., Naoum, S. and Fong, D. (1999), "Factors Affecting Safety Performance on Construction Sites", *International Journal of Project Management*, **17** (5), 309-315 .

Schein, E.H. (2010), *Organizational Culture and Leadership*, Jossey-Bass, USA.

Sillitoe, P. (2002), *Participant Observation to Participatory Development. Participating in Development: Approaches to Indigenous Knowledge*.

Wamuziri, S. (2006), "Safety Culture in the Construction Industry", in *Procs of the Institution of Civil Engineers-Municipal Engineer*, London: Published for the Institution of Civil Engineers by Thomas Telford Services, c1992-, 167-174.