Learning safety: what next? The case for a learning circle approach.

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Abstract

This paper explores the concept of 'learning circles' as a method for constructing meaningful occupational health and safety (OHS) learning experiences for construction workers. It envisions a training approach that actively engages the hearts and minds of the workers with the intent of creating a strong safety culture in the industry. Many of the subcontractors in the industry have not had positive experiences of classroom learning, and modern OHS training often reinforces these sentiments. The learning circle is an attempt to validate the safety knowledge that these workers possess, by encouraging their critical reflection process.

Introduction

This paper presents an analysis of some aspects of a research project that explored attitudes to OHS held by subcontractors in the domestic building industry. It was conducted because a large amount of anecdotal evidence gathered by the researcher strongly suggested that there was a growing culture of resistance to modern OHS legislation among subcontractors in that industry.

I firstly examine the OHS situation in the construction industry and the current state of OHS training in the industry. I then theorise and argue the research design, describe the research process, its suitability and the reliability/validity of the results. Research findings are presented, followed by a discussion that problematises OHS training in its current form, questions its efficacy, and suggests an approach that encourages critical reflection of the learners through a learning circle approach. Included in this discussion are suggestions that may be included in work activity training and supervisor training for the construction industry.

Literature review

The construction industry is a high-risk industry (Stromm 2001, p. 1) with a high incidence of workplace deaths, injuries and diseases (WorkCover 2001, p.5) and a poor safety record (Blockley 1996, p.51). According to Worker's Compensation statistics, the construction industry of NSW has the third highest incidence of employment injuries (WorkCover 2005a, p.11) and the second highest number of work-related fatalities (WorkCover 2005a, p.18) of all industries in NSW. The incidence of injury in the construction industry throughout Australia is 50% higher than the all industry rate (Breslin 2004, p.564).

Government initiatives following recommendations from the NSW Workplace Safety Summit 2002 focus resources on improving OHS and injury management in this industry through targeted compliance programs, the provision of industry specific guidance material, training initiatives and professional development (WorkCover 2005b pp.7 and 42). The NSW government has responded to recommendations arising from the NSW

Workplace Safety Summit 2005's Construction Industry Action Plan with another multi pronged approach (WorkCover 2005c, pp.18-26). In particular, it targets a review of work activity and supervisor training for the upcoming review of the OHS Regulation 2001 (WorkCover 2005c, p.10). My paper joins the discussion of the Priority Issue of Training recommended by the construction industry representatives at the Safety Summit 2005 by addressing work activity induction training and supervisor training.

OHS legislation in NSW requires all workers in the construction industry to attend two types of OHS inductions that will provide them with the competencies to work safely in the industry. Codes of Practice have been developed to provide practical guidance to help people comply with the law. These initiatives reflect a top down approach that subscribes to a 'product' view of training in which workers somehow acquire discreet bits of information packaged as competencies which they will use to make their workplaces and work practices safer. This approach takes no account of learning theory that views learning as a process within social, cultural, and political dimensions in which learners actively construct knowledge (Hager 2004, pp.14-15). It disregards the culture within which the workers/learners operate, and ignores the baggage that individuals bring with them to the training room, including their attitudes to both formal learning and OHS.

A problem for classroom based training in the construction industry is that many enter the building and construction industry with relatively low education levels (ACIL 1996, p.23), and the literacy and numeracy levels of the construction workforce are considerably poorer than those of the Australian workforce in general (Construction Training Australia 2001, p.17). Many developed negative attitudes to learning (Golding 2005, pp.1-3) through the 'wounding learning practices' (Wojecki, 2005) of their school years. Since then, the majority of their learning has been at work, and is informal, incidental, and based in praxis rather than codified theory, with up to 60% of subcontractors having no formal trade qualification (ACIL, 1996, p.xi).

Foucault (1980 in Linnell and Cora 1993, p.11) reflects that power that attempts to dominate and subjugate will be met with resistance. Hence, workers often come to courses with resistance. Within their own building industry workplace culture these same people feel powerful and validated. Training courses take them from a place and space of belonging and inclusion, and put them into a training room where they have never belonged and where they have previously felt excluded from learning technologies such as classrooms, tables, chairs, pens, paper, teacher-as-expert, timetables, and so on.

Research design

This research has been designed to increase understanding of the construction industry safety culture. My aim was to talk to and listen to subcontractors from the domestic housing industry with the objective of finding out what they think, feel and do about safety at work. The desired outcome was to find some way of addressing the safety situation in the building industry.

The main purpose of my study was exploratory. There has been very little research conducted to gain insight into how subcontractors understand OHS and what it means for them. I wanted to deconstruct subcontractors' subjective experiences and how they give meaning to their own situation. Therefore, I thought it was best to use a qualitative theoretical framework on which to base my research methodology. The quantitative

perspective may have had difficulty in allowing for attitudes to be made explicit, especially in the absence of current substantive research that describes those attitudes.

The principle methodology employed for this research was ethnography. Ethnography is an act of sense making in which the researcher attempts to uncover multiple layers of meaning held by the group being studied (Barab et al 2003, p. 3), capture the personal experiences of participants and explore their complex social situations (Punch 1994, p. 84).

Somerville (2005) has suggested that ethnographic methods are extremely suitable for research into workplace cultures. In her study of learning safety in the mining industry she found that 'cultural analysis can explain how worker subjectivities, including learning and practising safety, are constituted within these workplace cultures' (Somerville 2005, p. 6). She advocates that cultural analysis can help identify a 'potential locus of change' (Somerville 2005, p. 26) that one can use to mobilise workers to 'intervene in their own workplace practices' (Somerville 2005, p. 6). I believe that unless we identify and understand these cultural norms and use them to inform our strategies for implementing OHS change, we will have limited success in creating a safety culture of continuous improvement.

The data was collected through a combination of a short oral survey of 150 subcontractors, participant observation, in depth semi structured interviews with 11 subcontractors from 6 different trades, investigator diaries, and document analysis, and was simultaneously and iteratively recorded, analysed and coded into emergent themes. The data was often interpreted from a critical perspective. Critical theory works from the premise that people 'inhabit a world of contradictions and imbalances of power and privilege' (Pasco 2003, p. 6), and I felt that this analytical lens helped to make sense of higher order ideas emerging from the data.

Reliability of results was enhanced through triangulation, and validity was strengthened by my emic connection with the industry that made it difficult for the participants to mislead me, deceive me, or gloss over things. My working relationship of equality with the interviewees helped to address issues of power and perspective, which is essential when determining what version of culture is written (Barab et al 2003, p. 3). However, I offer one caveat – almost all participants in this research were experienced subcontractors, and any recommendations may not be wholly appropriate for new entrants to the industry. Further research is needed to assess the relevance of the approach to training suggested in this paper for these new entrants.

Findings

In this part of the paper I present and summarise some of the research data, using the exact works of the participants where appropriate. A complex picture emerged of the safety discourse of subcontractors, their workplace culture, and in particular, their safety culture. The construction industry is a male dominated workplace with traditional masculine values such as toughness, resourcefulness and independence. It has an oral tradition in which adventurous and risk taking behaviour is often glorified as heroic. Site life is dusty, dirty, noisy and uncomfortable. There is a long tradition of workers socialising at smoko (vernacular for 'morning tea time') and lunch, which reduces ennui and affords the feeling of belonging to this cultural space and place. All peoples are

embraced if their work is of high quality, while people who produce poor quality workmanship may be marginalised and remain peripheral. It is a practical industry in which people create tangible articles using the tools and skills of their trade. Most valued learning is informal and on the job, and much knowledge is tacit, embodied, rarely articulated, and almost never written: traditionally, the industry is based on doing and not writing about doing. To be successful, subcontractors must be fiercely independent as every decision affects their viability as a business. It has a relatively flat management structure with the builder holding the positional power. The better builders often hold personal power based on their expert knowledge and skills and their personal qualities and attributes that lead people to respect them (Cole, 1998, p. 124-125).

The safety culture is a subset of the workplace culture. It is not fixed but dynamic, flexible and contested. It is contingent upon the forces within the industry, and is maintained in a state of tension. Safety decisions are made continuously 'on the fly' (Fenwick, 2001, p.251) on a house building site because all processes are more or less hazardous and potentially risky. It is in the interests of subcontractors to avoid injury because if they cannot work they do not earn any money. Hence, they must maintain a balance between financial security, independent action, and contingency management.

The people who constitute the construction industry culture share some common perceptions of risk. They believe that construction sites are safer for them than for outsiders like owner builders, women or children, who do not understand the construction site. They are unanimous about not liking the paperwork requirements that are reifying OHS legislation. They seem to perceive short term financial risk as more important than personal safety. They all accept that building work degrades the body, but continue with it because it pays the bills. They often view the financial risks represented by WorkCover's enforcement as more hazardous than continuing with their present work procedures. Their reluctance to spend money on OHS is related to the fact that they have very tight profit margins resulting from the competitive tendering process that sets prices at a minimum. Subcontractors' subjectivities represent a balance between structure and agency, and are constituted within and influenced by the 'latent conditions' (Reason, 1997) created by the history and culture of the industry that favours costs and production over worker safety.

All participants in this research want to be safe at work, and almost all think that construction sites could be safer. However, most of these fail to see OHS as something that is beneficial to them, but rather, view it as an unfair imposition upon their already stretched resources of time and money. They believe that many of the rules do not actually address their real safety concerns such as repetitive movements, constant manual handling, poor organisation of the construction process, poor coordination and communication between trades, unclear areas of responsibility, and the noisy/dusty working environment. A strong theme to emerge was evidence of a growing culture of resistance to OHS, and WorkCover in particular. Many people considered much OHS legislation as neither practical nor effective, WorkCover inspectors as petty, dogmatic and unfair, and OHS courses as a waste of time.

> When we did the course, I totally believe it was nothing but a money thing, because it was a total waste of my time…and I didn't learn anything, and I went there wanting to learn what safety things I had to do.

There are many such anecdotes that reinforce a negative storying of OHS. The alarming corollary is that OHS is seen as separate from their embedded safety practices born of years of praxis, rather than as a means of refining them. Given this background, how can they be expected to acquire the new OHS competencies and use them at work to transform their workplace? The challenge is to change these attitudes, beliefs and behaviours.

In response to the open ended oral survey question 'How did you learn to work safely?' asked to 150 course participants, the most often cited response was 'Common sense' (25%), followed by 'Mistakes over the years' (13.3%), 'Stories from others' (13%), 'Thinking ahead' (12.6%), 'From other jobs (10.7%) and 'Watching others' (9.5%). Low response rates were for 'OHS courses' (1.3%) and 'School' (1.3%). Their learning was not generic but specific to the tasks they perform and the tools they use. These results suggest that subcontractors place an enormous amount of trust in their own common sense to help inform their safety judgements and decisions. This trust in their own decision making is fundamental to their success as subcontractors because they are constantly required to make accurate practical judgements in the specific contexts of ever changing workplaces. Common sense is in fact reflective practice, and many of the decisions reached through common sense come from reflecting upon their mistakes, stories, planning, experience, and involvement with others at work. It is developed and informed through participation in the process of performing construction work, which means common sense is learned, is not fixed, and is amenable to change as new circumstances challenge previously held conceptions.

Throughout the history of the building industry, safety has been part of and integrated into subcontractors' core business activities, but not necessarily enunciated or defined anywhere. Safety knowledge is often tacit knowledge and is learned as part of learning how to do the job properly: most of the safety learning that subcontractors value has occurred informally as part of performing construction work. Their safety behaviour is a result of heuristically making iterative judgements about the hazards and risks they face. Historically, the construction workers have defined this process for themselves and have developed a culture that integrates safety and work. Now, government has legislated what risks are permissible and what risks are not. Subcontractors have a deep respect and trust for this safety knowledge gained from years of practice, and a distrust of safety courses that attempt to privilege paper/procedural knowledge over practical, embedded and embodied safety knowledge.

Reflective practice

Reflective practice can be understood as the 'ability to evaluate critical incidents within daily work, using this evaluation as a means of improving practice and knowledge' (Macfarlane et al 2005, p.50). Reflective practitioners analyse a problem, seek to understand it within their context, think about the results of their actions, and puzzle over why things worked out like they did (White 2002, p.2). The reflective practitioner is one who provides space for 'new possibilities to be explored and realised' (Moss and Petrie 2002, in Macfarlane et al 2005, p.50). An essential feature is that knowledge is constructed rather than reproduced. In the following quote from my research, the tiler is struggling to create new knowledge, a new way of doing things to protect himself

There's one that I haven't really come to grips with yet, but I've heard of um, when you cut with a saw, you cut a tile with a saw, the glaze is actually silicon based, and that dust causes silicosis, so coming to grips with that one is really difficult. You can put a mask on and it's a bit of effort, but still you can put it on but then you've gotta sit there for five minutes while the dust dissipates, you know what I mean. So it's a big one to come to grips with.

This reflective way of thinking is part of the construction industry culture and helps construction workers build up a 'reservoir of insights and intuition' (White 2002, p.2) which enables them to problem solve in their many non-routine situations. This process is not formalised, nor is it named in the construction literature (ACIL, 1996, p54), but an examination of the storylines of the research participants reveals a strong culture of reflective practitioners. Results from the survey indicate that construction workers do not want to get hurt at work, they know construction sites are not perfectly safe, and they would like them to be safer. The workers tendency to learn through reflection and their desire for safety are two 'cultural levers' (Eales and Spence 2005, p.203) we can include in their training experiences that will encourage their motivation, which is absolutely essential if they are to learn and transfer that learning to the workplace (Yelon, 1992, in Cornford 2002, p.90).

Discussion

In this section I discuss the implications of these findings for OHS training in the construction industry. The 'Code of Practice: occupational health and safety induction training for construction work' (WorkCover 1999) seems to employ a 'banking' (Freire, in Vercoe 1998, p.57) philosophy of education in which learning is seen as a product that is acquired as discreet items of knowledge or skill (Hager 2004, p.3). It states 'The objective of a work activity ohs induction training course is to *provide* participants with knowledge of the health and safety issues that are relevant to the construction work activities undertaken by a particular industry sector' [my italics](WorkCover 1999, p.11). The philosophy behind this statement dismisses the knowledge that the workers already possess as not real or true knowledge, and continues with the wounding process of marginalizing identities and disempowering people. People will resist being treated like this, and it will reinforce their cultural belief that WorkCover requirements are irrelevant, ineffective, costly and unfair.

OHS legislation and enforcement requires construction workers to do some or many things differently to how they have been done in the past. The technical solutions offered by Codes of Practice do not cater for the many diverse, complex and non-routine situations that arise daily on a construction site. Workers need to be able to quickly search through their myriad experiences to create an answer for each new situation. OHS courses that use the reflective practice model may help refine and polish the reflective practice toolkit already possessed by construction workers.

Currently much of the reflective practice within the building culture occurs informally on the job in small groups or off the job at social occasions. However, with no experienced person to guide it, these reflections do not necessarily result in critical reflection, but are often constrained by the pervading underlying narrative of 'how we do things around here'. That is, they are often autopoietic in that they reinforce traditional approaches, rather than create new knowledge.

To maximize the benefits of the learning constructed through their informal reflecting, 'people need to bring what they are learning into conscious awareness' (Watkins and Marsick 1993, p.26). Hence, it may be beneficial to provide them with a safe place and space in which critical reflection can be modeled, trialled, explored and mentored. This could be achieved in a classroom situation facilitated by a skilled and experienced person who poses relevant and context specific questions, or allows the class participants to pose their own real life questions. The trainer will encourage critical reflection which will critically evaluate old practices in a culturally cohesive setting and encourage the group to pool their knowledge and skills to create the new knowledge required. The new knowledge will need to be unencumbered by the grand narratives that dominate site life, such as 'building work is dangerous – there will always be accidents and injuries', 'it costs too much', or the tendency to blame the injured worker for not being careful enough. If they are supported in the critical reflection process within their cultural group it will have a 'powerful effect on the degree to which they are supported in letting go of older ideas and practices and attempting new ones' (Branford and Schwartz 1999, p.81).

Learning circles that teach and encourage the skills of critical reflection are being trialled successfully in the Bachelor of Human Services (Child and Family Studies) at Griffith University in Queensland (Macfarlane et al 2005). The learning circle provides an opportunity for self directed learning through 'shared inquiry and dialogue' (Karasi and Segar 2000, in Macfarlane et al 2005, p.53). These learning circles encourage students to become more self reflective, metacognitively aware and self directed learners. They find that the approach helps develop such soft skills as communicating ideas and information, working with others and in teams, and planning and organising activities. These are three of the Mayer Key competencies identified by Hager et al (2002, p.14) as critical for successful OHS outcomes, and Wadick (2005) as lacking on house building sites and negatively impacting on OHS outcomes for workers.

These three Key Competencies are especially critical for supervisors on construction sites, such as builders, head contractors, site forepersons, and so on. The Construction Industry Action Plan (WorkCover 2005c, p.24) makes supervisor training a priority and suggests a review as part of the OHS Regulation review. It further proposes that mandatory VETAB accredited competency based courses be developed and implemented. It is crucial that these courses address these three Key Competencies in a culturally relevant environment of critical reflection. These are not just technical skills that can be learned by 'doing a module' on each, and then transferring the learning to the workplace. These skills need to be learned through doing; they need to be practiced and mentored. A series of classroom based learning circles and site visits may help facilitate the learning of all three skills.

Conclusion

In this paper I have described aspects of the OHS situation in the domestic housing segment of the construction industry and discussed the mandated OHS training requirements for workers in the industry. I then present relevant results from a qualitative research project that sought to make explicit the attitudes to OHS held by subcontractors.

The discussion section problematises the effectiveness of OHS training at providing learners/workers with the necessary attitudes and skills to continually improve their

safety practices at work. I introduce the concept of the learning circle as a means of conducting OHS work activity training that will encourage the skills of critical reflection that may be so necessary for the ongoing self-directed improvement of the safety culture on building sites. The aim is to help construction workers re-story their OHS narrative to create positive and empowered safe workers.

My research has demonstrated that a significant proportion of construction workers' learning occurs informally on the job through reflective practice, and requires participation in the construction workplace culture. OHS training largely disregards this and views OHS learning as the acquisition of cognitively acquired individual competencies that will somehow be transferred to the workplace. This is disrespectful to the workers and ignores risk perception research, cultural studies, and adult education principles.

Safe working behaviour needs to be understood as more than following a list of rules, as this often results in minimum compliance. It would be better seen as a state of mind in which a person is always trying to think of safer ways to do things. I have demonstrated in this paper how a learning circle approach to OHS training in the construction industry may encourage and develop the critical reflection of construction workers. This will help them to mobilise their own energy to creatively innovate new culturally accepted practices that will improve their safety at work. This proposal is being more fully developed into an empirical longitudinal action research project that will test the practical application of my theory.

Modern OHS legislation defines the management of OHS purely from a technical perspective. It focuses on individual behaviour change and technical measures, and pays little attention to the social structure of the industry. Legislation has decided how to interpret hazards and risk, and ignores, minimises, or denigrates the embedded and embodied safety practices that have developed over many years of praxis. In reality, many of these practices in the construction industry are not safe, as the high incidence of injury and disease in the industry attests. The safety culture of the construction industry believes it is a dangerous industry in which injuries are to be expected, and tends to blame the injured worker for not being careful enough. It would be better if construction workers believed it is an industry where working safely poses challenges that can be overcome with careful consideration. The question for legislators and enforcers is how best to change this perception.

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