LEARNING IN THE NEW WORK ORDER

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Introduction

The last decade has seen the emergence of a new body of literature, which Gee and Lankshear (1997) termed 'fast capitalist' texts, produced by business managers and consultants (for example Peters, 1994; Drucker, 1985; Hammer & Champy, 1993). This literature introduced some of the discourses surrounding the new world of work, variously termed post-fordism, flexible production, lean production or the new work order (Adler, 1992; Womack, Jones & Roos, 1990; Gee & Lankshear, 1997). Similarly, recent Australian government policy and strategy documents have adopted a technicist or scientific management form of rhetoric to explain the need for industry restructure and the implementation of a training reform agenda. As few studies had focused on what this 'new capitalism' (Gee, 2000) looked like in practice, this became the focus for two research projects conducted by the Queensland Centre of the Adult Literacy & Numeracy Australian Research Consortium (ALNARC)[1] within the Civil Construction industry in Queensland, Australia. This industry was identified as being among the first to adopt the government policy of implementing training using the new training packages[2] to upskill the workforce. It will be argued in this chapter that while some workers viewed the training and workplace meetings as enabling, at the same time the language of social justice and democracy was co-opted by companies to achieve worker compliance and commitment. For example, workers were encouraged to 'own' training and to become 'empowered' to make decisions as members of self-monitoring workteams. As a result, there were tensions between how knowledge or learning was being constructed, by whom and for what purpose.

The initial ALNARC research project (Kelly & Searle, 2000) involved on-site observations and interviews with key personnel across four companies involved in motorway construction. This research focused on the effects on learning and work outcomes, of the inclusion of literacy and numeracy competencies within workplace training. During this study, it was found that one civil construction company (to be known as Constructco) had taken the lead in implementing the civil construction training package through firstly, drawing up a set of training matrices detailing the individual competencies of each company worker[3] and secondly, through developing a range of training and assessment programs, and training products. In addition, the company appeared to be developing as a learning organisation in which individual employees were allocated to project teams and encouraged to access training. Finally, in interviews with employees, there appeared to be a commitment to an increased level of training. Taken as a whole, these conditions suggested that not only did this company exhibit the characteristics of a 'high performance' workplace, they did so while adopting the technologies of training packages and frontline management programs. For these reasons, and to maintain a measure of continuity in the research, Constructco company staff and workers were invited to collaborate further in the second research project.

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[2] Training packages are sets of industry competency standards and assessments which relate to the Australian Qualifications & Training Framework (AQTF).

[3] In Constructco a distinction was made between company 'staff' and 'workers'.

A case study approach was used for the second study in order to analyse one model of what might be considered 'best practice' in the new workplace. According to Delbridge (2000: 6) best practice means working towards "…the integration of low buffered and tightly controlled technical; systems with flexible, high commitment, team-based social systems that incorporate increased worker skills and involvement". The aim was to analyse the discourses relating to learning through examining how staff employed at different levels within this company viewed the new training program, and, in addition, to elicit understandings or assumptions about the role of literacy and numeracy within training and the organisation. In order to provide a background for the ensuing discussion of these issues, concepts of Discourse/discourse (Gee, 1996) and two models of literacy (Street, 1996) will be introduced in the next section of this chapter. This will be followed by a description of the methodology used, while the subsequent discussion section will examine how knowledge is being constructed within this company. Further, it will be argued more broadly that the discourses of new capitalism construct literacy as being fundamental to new work practices, to the construction of knowledge and to worker identities.

The discursive context of workplace learning
In order to describe and make sense of Constructco's meaning systems and social practices with respect to training and requisite literacy and numeracy skills, company policies and industry standards were examined and interviews with company staff conducted. In addition it was necessary to analyse how these meaning systems were generated and sustained through identifying the underpinning values, as it is through values that people have the capacity to adapt to, react to, or shape an environment. A starting point for this analysis was Gee's (1996: 127) definition of Discourses as "ways of being in the world, or forms of life which integrate words, acts, values, beliefs, attitudes, and social identities" all of which are socially and historically constructed. Such Discourses involve many sub-Discourses made up of concrete objects (literally and metaphorically in the construction industry), for example, heavy machinery, scaffolding, site plans and signage, as well as abstract concepts such as norms, values and beliefs. Another way of looking at the company, or the workplace Discourse, is as if it were a club, with its own set of rules about who can or cannot be a member, and how members ought to behave. These rules may or may not involve a range of 'rites of passage' or tests which serve to preserve the culture of the club while at the same time ensuring membership. Further, Gee (1996: 139) argues that these 'Discourses are not mastered by overt instruction…but by enculturation or 'apprenticeship' into social practices". So, as we shall see, for Constructco employees this involved being inducted into the company and the company philosophy, as well as complying with company expectations, attitudes and ideologies, or risk being 'let go'.

Within the larger Discourse of the workplace there was also a range of discursive practices relating to the use of spoken and written language as texts, or 'discourses', that is, "connected stretches of language that make sense, like conversations, stories, reports, arguments, essays…" (Gee 1996: 127). In Constructco these discourses included pre-start checklists and work activity briefings which, it will be argued, allowed both for the efficient work of the companyand individual accountability as well as a degree of surveillance. As a result, workplace literacy has become more than an enabling skill or social practice, it also takes on a moral dimension and is initmately bound up in power relations.

One of the problems when investigating 'literacy' or 'numeracy' is that there are no universal definitions of the terms to which everyone subscribes. For politicians and many industry trainers it is useful to conceive of literacy and numeracy as sets of discrete skills which can be readily quantified, and which, when mastered would transfer to different contexts. This 'autonomous' model of literacy (Street, 1996) and numeracy privileges a view of literacy and numeracy as decontextualised basic skills or 'generic competencies'. As a result, 'literacy' and 'numeracy' are seen to be technical methods of achieving practical purposes. This is the view which underpins the government's introduction of training packages. Subsequently, literacy and numeracy assessments can be undertaken to determine who needs what literacy and numeracy training either within, 'built in', or 'bolted on' to on-the-job training. However this narrow view is contested by researchers (de Castell, Luke & Egan 1986; Street 1996; Hull 1997; Heath 1999) who argue that literacy and numeracy

are more than the sum of individual skills, they are also social practices. This 'ideological' model (Street, 1996) offers a socio-cultural view of literacy and numeracy as activities which have meaning to the people who use them within the contexts in which they occur. Further, it is maintained that notions of literacy are tied up with questions of power and interest (Fairclough, 2001) so certain forms of literate or numerate practice are deemed to be desirable as they maintain the social order of the workplace, for example, compliance in filling in forms, completing checklists and following instructions. But there are also certain practices which maintain the social organisation of the workplace, that is, they enable employees to work collaboratively, for example at Work Activity Briefings. Other practices, such as inductions, assist in the 'socialisation' of new employees in to the workplace (Gee, 1996). Often the socialising nature of such discursive practices are not recognised by supervisors and management, who tend to focus more strongly on assessable skills. It is this tension between workplace skills and workplace practices which formed the core of the research.

Case study research
The research which is reported here was based on a single case study which Feagin, Orum and Sjoberg (1991) argue is an appropriate methodology when a detailed, in-depth investigation is required. In this case, data were derived from an analysis of relevant company documents (with permission) and industry standards, a mapping of the company structure, and audio-taped open-ended interviews with key personnel across a range of positions within Constructco[4], as well as an ongoing examination of the literature relating to the changing nature of work, workplace learning, and the discursive context of workplace learning. Case study is also consistent with the ethnomethodological approach (Baker 1983, 1997; Silverman 1994, 1997) which was used to analyse interviews, and which is based on a process of induction. That is, the data were the initial focus of the study and interpretations were derived from these data (Funnell 1996). As with other qualitative methods, there was a concern to minimise subjectivity and ensure a measure of validity through triangulation with a range of data sources.

A social constructivist approach was taken to interviewing, that is while a list of topics were offered as possibilities for discussion, the parties to the interaction were understood to *actively* (Holstein & Gubrium 1995) and cooperatively consitutue the meaning that ensued. So attention was paid to both the content of the interview and the ways in which both parties interactively constructed that content.

> Construed as active, the subject behind the respondent not only holds facts and details of experience but, in the very process of offering them up for response, constructively adds to, takes away from, and transforms them (Holstein & Gubrium, 1995, p. 8).

Decisions regarding these additions, subtractions and transformations and also, *omissions* (Agger, 1991), were based on the meaning that was both brought to the interview situation and developed as the interview evolved.

The viability of the project was initially discussed with the key informant, the Manager of Training and Development, who was responisble not only for the initiation and implementation of training within the company but also within the civil construction industry at state and national level. Subsequent interviews were then conducted by taking a vertical slice through the company, starting with company staff, for example the Systems Manager and Community Liaison Officer, the Workplace Health and Safety Officer and Trainer, the Training Coordinator for the region, then the Project Training Officers and Leading Hands who were employed as project workers and finally back to the Manager of Training and Development. All of the tape-recordings of interviews were transcribed and copies of the transcripts were made available to the interviewees for comment, confirmation or ammendment. Using a version of

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[4] Owing to the transient nature of project work, those interviewed were employed staff and project workers, from the Manager of Training and Development to leading hands, but not subcontractors or hired labour.

'grounded theory', the transcripts were read and a number of themes that were recurrent and which reflected the research interests were identified. The transcripts were then combed to find text that focused on these themes and the text fragments were collated into separate tables which were subsequently annotated. An initial content analysis of the discourses associated with the themes, suggested that the company was developing as a learning organisation, therefore the literature relating to organisational change and the characteristics of a learning organisation was consulted. A second analysis of the data resulted from this step.

One of the critical tools employed in data analysis was that of membership categorisation (Sacks, 1967, 1972; Baker, 1997).

> The constitutive trait (of categorisation) carries with it a cluster of related possible actions, traits, preferences, haunts, appearances, places, times, etc.. It is the nucleus of other categorisation-tied or relevant features which all together provide procedures for situated inferences to a host of other issues regarding category incumbents in their settinged availability (Jayyusi, 1984 p.26).

The ways that membership categories were used depended on the particular contexts of that usage. For example, in the interviews at Constructco, there was an understanding that the term 'training' had replaced the broader one of 'education' and that there was a normative dimension to this replacement. This normativity could reflect the national focus on training as presented in Industry Training Advisory Board documents such as training packages and in staff development presentations such as those based on Workplace Trainer and Assessor and Frontline Management courses. More recently, however, the concept of 'learning' had been promoted in Constructco as a preferred alternative to that of 'training' and with this promotion came a rationale based on a number of principles such as the move to becoming a 'learning organisation' and the need to ensure flexibility of course components and assessment forms.

In order to conceptualise this new workplace and analyse the discourses of training and development, and worker identity within it, the following issues will be addressed: changing work conditions; characteristics of a learning organisation; new types of workers; and implications for workplace learning.

Changing work conditions
The move to globalisation and increased competitiveness among companies has resulted in greater demands being placed on enterprises to increase production with greater efficiency and reduced costs in terms of time, safety and potential litigation. One response has been the introduction of Japanese management systems which include the following features: "just-in-time (JIT) inventory, production levelling, mixed-model production, continuous improvement, visual control, errorproofing, production teams, and standarized work" (Liker, Fruin & Adler, 1999). In short, these add up to 'lean production'.

> Lean production is a superior way for humans to make things. It provides better products in wider variety at lower cost. Equally important, it provides more challenging and fulfilling work for employees at every level, from the factory to headquarters. It follows that the whole world should adopt lean production, and as quickly as possible. (Womack, Jones & Roos, 1990: 225)

In the 'lean production' model control resides in three layers of management: the corporate structure and systems layer; factory organisation and management (in our case the management of the construction arm of the company), and shop-floor production systems (construction teams). In addition, it is recognised that the organisation exists within certain social and institutional contexts. In the case of Constructco, these institutions are politico-economic (government regulations and standards, and the broader economic climate) and the social context of national industry standards and the introduction of training packages. Data from the case study will be used to exemplify each of these management systems in turn.

Corporate layer
The company at the centre of this case study, Constructco, is the civil construction arm of a larger mining and construction enterprise. It was one of five companies employing 1760 workers overall, which were involved in the construction of a 100 kilometre motorway (and subsequent motorways). According to the company mission and policy statements, Constructco has been responsible for a range of projects that *"sustain our way of life"*. The company offers a *"single-source solution"* - it can design construct, build, own, operate and maintain as well as transfer options. It also has *"single-point accountability"* which is of benefit to clients. The company code of ethics includes a statement regarding the provision of opportunities for the inclusive *"our"* people to develop and enhance their skills and knowledge. This is expanded upon in the corporate objectives as a principle: *"to enable our employees to develop their potential by providing appropriate training and career path development"*. Meanwhile the corporate quality policy is built on maintaining and enhancing a reputation for efficiency, cost effectiveness and timeliness in the completion of contracts. A feature of the contract provisions with the state government, agreed upon by the signatory parties, was a commitment to the training of workers using the Civil Construction Training Package. We found that Constructco had taken the lead in implementing this form of training and assessment.

Organisational layer
Constructco takes a strategic approach to employee relations and targets the development and maintenance of the highest level of workforce and sub-contractor performance. As a result, training assumes an extremely high profile within the company. The training and development goals of the company are to ensure that employees are *"the best they can be in their role"*; to *"facilitate the rapid transfer and development of knowledge"*; and *"to become a learning organisation"*. As a result, every employee can access formal and informal learning and skills development programs to assist in personal and organisational development. The company itself is an Registered Training Organisation and is capable of delivering nationally accredited programs itself or in conjunction with other providers. Skills development is available in a diversity of delivery modes both on and off-site.

Production systems layer (project construction teams)
This layer of the organisation encompasses the on-site tools and technologies for plant operators, who typically operate a range of machines including backhoes, graders, scrapers, front-end loaders, tractors and excavators; and non-plant operators and engineers, who engage in road making and maintenance, tunnel construction, bridge building and pipelaying. In addition, and consistent with Japanese management systems, there are well defined organisational technologies such as the rules and procedures in relation to work practices, quality standards and procedures, safety audits, check lists and continuous improvement systems. For example, the Constructco version of continuous improvement used a cycle of "planning, executing, checking and refining operations to improve efficiencies" (Jackson, 2000) all of which required an audit trail of extensive record keeping and check lists as part of the daily tasks of employees. Quality assurance measures included documenting compliance to standard operating procedures, documenting compliance with government and industry regulations, as well as monitoring performance and costs. The implications for workers, of the introduction of these compliance and accountability measures will be discussed in a later section.

While it will be argued later that the company was moving towards being a learning organisation, the very presence of these management layers appeared to promote top-down control within the company. Together with a number of organisational technologies, they constituted a form of imposed bureaucratic control (Edwards, 1981). Other forms of control both external and internal were demonstrated through the implementation of codified systems of knowledge, with the expectation that workers will "continuously gain and apply new knowledge to the whole work process in which they are involved" (Gee, 2000: 185). This was formalised through the introduction of a training program in which relevant competencies from

the Civil Construction training package were implemented and documented using a skills matrix. But, as Darrah (1997) points out, the analysis of tasks into a set of competencies or skill requirements is problematic. First, this is a reductionist approach which isolates those discrete skills, close to the performance of a task, which are deemed to be essential but little attention is paid to how these skills are seamlessly articulated into the actual work of a skilled worker. Secondly, there is an assumption that all workers require the same skill set - in this case, Certificate Level II. Thus, although the talk is of work teams being a collective of individual team member's skills and experiences, the reality is that all are measured against each other and the matrix. Thirdly, predetermined skill sets may not allow for the site or context specific demands of the job, nor for seamless transfer to another project. Fourthly, a focus on individual performative skills and abilities often overlooks the importance of social or 'soft' skills and literacies required in team work and engaging in people focused activities. Often "the person as an active, co-producer of the workplace is missing" (Darrah, 1997: 252) an issue which is taken up in the following and subsequent sections.

Characteristics of a learning organisation
The 'lean production' organisational model promotes workers as economic units working efficiently and productively. However, if organisations are considered as 'social constructs' then the focus shifts to exploring the social capital of individuals as meaning-makers, drawing on shared understandings of the world, in this case, the workplace. This involves both the tacit knowledge and the mental schema to make sense of that world and problem-solve. For example, workers bring sets of individual and shared values and experiences all of which might be capitalised upon when a company develops as a learning organisation. According to Senge (1990:1), learning organisations are,

> ...organizations where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together.

In the new workplace, managers are required to develop collaborative workplace cultures and to take increased responsibility for the development of the individual employee as well as the organisation as a whole. However, as the nature of work moves to being project based, increasingly organisational decisions are being made by project teams, and therefore the role of the manager has become one of a team 'coach' or 'champion' providing leadership, and encouraging or empowering workers in order to develop or harness their knowledge, skills and creativity (Dew, 1997). In Constructco, that champion was the Manager of Training and Development, who had a vision for the industry as a whole and who was instrumental in developing the industry competencies. While the 'design' of the company becoming a learning organisation was stated in the company policy and objectives, how this design was enacted became the responsibility of personnel at all levels within the company, that is, each employee had an organisational role to play. Employees were allocated to teams *"well for the zone, we sort of answer to one* [person] *but we're still working as a team"* (Leading Hand) and not only were workers required to attend the various meetings, they were also expected to accept responsibility for the outcomes. This was formalised through a signing-off process. *"The JSAs*[Job Safety Analyses] *and Work Activity Briefings, the crew actually sit down and go through them. They sign off that they agree"* (Training Coordinator). As Gee (2000:185) argues "they are meant to proactively and continually transform and improve that work process through collaboration with others and with technology". In this way, new workers are 'socialised' into the Discourse of the workplace, or 'community of practice' in which they collaborate in distributing roles across available tools and technologies. As a result, tacit knowledge of the company, its rules and values, is gained through immersion in work practcies with each project team member being encouraged to become a mentor, while the former manager became the team coach.

> *One of the things that came out of the training summit was a brief that we will ensure that we can do everything we can to make people the best they can be in their roles. ...It's*

continuous improvement. Within this company it's from the very top down to the very bottom. Our Managing Director; he probably drives the culture…but again that culture permeates down through the company. …our supervisors, foremen and superintendents. They're pushing because it's their crews. [Training Coordinator]

As Frenkel et al (1995: 786) argue, "the trend away from routine work towards more creative, information and people focused activity...leads management to cede more control over the work process to employees and requires management to ensure reciprocated trust". The data depicted in Table 1 is an attempt to track the 'people focused' activities at Constructco. Although the informants were not asked specifically about organisational communication or opportunities for dialogue, these activities were referred to often during the interviews. The very frequency of reference suggests that these activities have become essential enabling bureaucracies (Liker, Fruin & Adler, 1999).

Table 1: Workplace activities

People Focused Activity	Time	Personnel	Topic
Inductions	When hiring new employees	WH&S Officer	Induction to company, Workplace Health & Safety
Work Activity Briefing (WAB)	Commencement of new job	Whole crew	Site plans, training needs, equipment
Pre-start meetings	Every morning (sometimes evening)	Leading Hand to whole crew	Objectives for the day Problem solving Discussion of previous day
Pre-start checklists	Start of shift	Individual	Equipment checks Safety checks
Task specific briefings	Start of shift	Individual	Task objectives Problem solving
Job Safety Analyses (JSA)	Commencement of new job or task	Whole crew	Analysis of safety procedures Environmental issues
Toolbox meetings	Once a fortnight	Leading hand or Foreman to crew	Job issues Safety issues

These activities represent some of the occasions at which workers at all levels within the company collaborate creatively in innovation and decision making. What this actually means in practice was articulated by one of the leading hands who described a Work Activity Briefing.

> *If we're starting a new job or a new task we'll have a WAB* [work activity briefing] *and that's where we'll sit down with the plans, the crew doing it. And ... that sorta ...covers everything from training, what equipment we're going to need, how long is it going to take us... So you look at the plans and work out the whole job, how it's going and who's doing what and how we can get a bit of training – maybe swap guys around.*

The crucial role of communication and literacy in understanding, recording and signing-off on these meetings will be discussed in a later section. Here it is argued that while the people focused activities might be seen as top-down bureaucracy, they also enable a shared learning environment to be developed. One method of achieving this is for the training managers to attend workplace meetings, to encourage

workers to 'own' the training and to model and support learning. In summary, a learning organisation is one in which the employees are continuously learning while at the same time being active in scanning and responding to the environment (internal and external) as consistent with company values and ideologies. Thus "learning becomes the new form of labour" (Zuboff 1988: 395) and the sought-after employees are the 'knowledge workers'. But, does the new credentialism result in more knowledgeable workers? This issue will be taken up in the next section.

New types of workers
We have seen that fundamental to the development of a learning organisation is the promotion of dialogue. In order to advance change within the company, it was important that workers understood that their experiences and opinions were valued. So, workers were encouraged to question and problem-solve, in the knowledge that they would receive supportive feedback. As the safety officer/trainer commented, once all the industry wanted was a labourer "*from the neck down*". Now, he encourages young workers "*to start using their heads*". So, despite training packages focusing on competence relating to performative skills, there has been a shift in training from a focus on 'doing' skills to high-order 'thinking' skills. In addition, there has been a transfer in conceptualising the new 'model' worker from a focus on 'ability' in terms of knowledge, dexterity and experience, to that of a 'willing' worker who is motivated and identifies with company values (Flecker & Hofbauer, 1998). This was evident in the transcripts of interviews from the Systems Manager (see below) and the regional Training Co-ordinator (see previous extract), who both spoke about a culture of 'continuous improvement'

> *We…have a very strong push on training with Constructco and it's been evident in our motorway project…it hasn't happened overnight with the company, that we have a culture of training and a will and desire and in fact our supervisers are trained to make that part of their repertoire…time is made available to train our employees so we get better outcomes at the end of the day. …And it comes from people…very high up in our organisation, that have the vision to see that this is something that is worth investing in. … And by doing that and allocating that resource you've then got a dedicated person, well trained, well skilled, well versed and experienced in that sector.*

Each of the extracts demonstrate the ownership of training in this company through use of the inclusive 'we', the repetition of the commitment to a 'culture of training' and the reference to this being a 'visionary' project. Further, this commitment results in a positive outcome which takes the form of a 'dedicated, well trained, well versed and experienced' employee. Thus workers are selected, and promoted not only on the basis of their technical competence but also on individual performance, commitment, loyalty and compliance with company values as evidenced by the following statement by the Constructco safety officer.

> *We had another Superintendent that came from an outside company and it just didn't work out. He didn't follow the* [Constructco] *philosophy and wanted to do his own thing... so they decided that perhaps he wasn't the man for them.* [Constructco] *wasn't the company for him.*

As a result, individual workers must be prepared to reposition themselves, to reshape their identities, behaviour and mental/emotional dispositions as part of organisational socialisation. In Constructco, engagement in organisational activities is seen as worker empowerment, the importance of which is described in the following excerpt in which the Manager of Training & Development articulates his vision for the success of the work activity briefings.

> *Now, that's pushed that right down and gained ownership. Everybody in that team is then empowered, in fact, to do that because it's been discussed, it's been signed off. They*

physically sign it off, as you know. So that then empowers people to take action without having to wait and be directed as long as it's actually in line with that plan.

Increasingly, the responsibility for compliance to industry standards, to workplace health and safety requirements and environmental legislation is pushed on to workers. There is an expectation that workers will take on these new responsibilities, but in addition, that they will need less supervision and be able to internalise their new roles in the workforce. They will, in fact, be "*empowered*" to make decisions. Thus management and workers will together transform the workplace.

> After reengineering, work becomes more satisfying, since workers achieve a greater sense of completion, closure, and accomplishment from their jobs ...work becomes more rewarding since people's jobs have a greater component of growth and learning. ...People working in reengineering processes are, of necessity, empowered. As process teamworkers they are both permitted and required to think, interact, use judgement and make decisions. (Hammer & Champy, 1993: 69-70)

Thus, workers are being directed to change from being 'constructors of knowledge' affected by but fundamentally not part of their environment, to become 'enterprising selves' being responsive, adaptable and flexible, engaging in work learning as "changing participation in the culturally designed settings of everyday life" (Lave, 1993: 5-6). So, the discourse of worker 'empowerment' at Constructco, while giving space for worker innovation and participation in decision making, is at the same time constrained by a range of guiding mechanisms, a recycling of Weber's 'iron cage of control' (Barker, 1993). With the introduction of work teams, the locus of control has shifted from management to workers - a form of 'concertive control' (Hirschhorn & Mokray, 1992). Not only are worker identities being shaped by the company mission statement but they are also constrained by compliance with normative practices and controls as part of internal audit trails.

Further, studies by Hull (1997) and Darrah (1997) indicate that some workplace practices are highly contested. For example, access to knowledge, learning, guidance and support is not equitably distributed. Access depends on compliance with company values or potential, either as a member of staff, or as a 'core' project worker. Gee & Lankshear (1997) refer to core workers as 'enchanted' (as in 'under a spell') workers. That is, as project workers they have a 'portfolio' of skills and knowledge and a willingness to comply with company systems and values. They are therefore able to market their skills and knowledge in order to move on to new projects. At Constructco, the concept of 'core worker' was defined by an engineer as being those workers *"that know our systems, understand our work ethic and culture, and help disseminate that to others that work in and around them"*. Given that work in this industry is essentially project based, then taken a step further, workers who build up a portfolio of skills should find it much easier to move from project to project - a seamless movement of qualified workers across industry sectors. However, in practice it is not that simple. There is no guaratee that the company will sustain them in the long term, or that their portfolio of skills are those required on the next project. They could be replaced by a different team with a different skill mix. Also for project workers there is an increased blurring between their public 'company' lives and their private lives, as they have to chose whether to take their families with them as they move geographically to another project, or go without them. But, as indicated earlier, while these core workers are likely to be employed on projects, increasingly the company is outsourcing work to subcontractors and labour hire firms. In general, these 'disenchanted' workers do not have access to the same social capital as training includes competencies assessed on-the-job. The apparent paradox was identified by O'Connor (1994: 13) who argued,

> In order to achieve maximum flexiblity, companies will increasingly [subcontract] a range of functions, and further reduce and segment their workforce by maintaining a core workforce which is multi-skilled, flexible, and can be used across operational functions, and a peripheral workforce which is more disposable, based on part-time and temporary work, short term individual contracts, and fewer employment rights and entitlements…

At Constructco, some subcontracted workers are offered training (if their employers are prepared to pay for it) but most are excluded, as are hired labour. This has enormous implications for these workers. In an aside, one of the trainers commented that unless workers achieve basic qualifications at certificate level II within the next two years, they would become virtually unemployable, a fact that was recognised by the Systems Manager who stated "…*and we need to find ways that we can actaully include others outside our own direct employees, employed in the same process*". Hammer & Champy (1993: 70) summarised the situation as, "If the old model was simple jobs for simple people, the new one is complex jobs for smart people, which raises the bar for entry into the workforce. Few simple, routine, unskilled jobs are to be found in a reengineered environment". Thus, non-core workers are likely to become the displaced, marginalised or 'disenchanted' workers (Gee & Lankshear, 1997).

Implications for workplace learning
So far, we have examined the workplace from a fast-capitalist perspective in terms of lean production, and secondly in terms of social capital. Now we will take a critical stance. Viewed from a 'political' perspective, the organisation might be seen as a site of struggle between competing interests and identities. One apparent contradiction lies in the difference between the 'symbolic reality' of the company mission statements and the 'material reality' of organisational relationships. We have seen how on the one hand the company discourse includes 'empowering' workers while in practice this means they take on more tasks, demanding higher order skills and responsibilities, but have little opportunity to influence strategic directions. Further, based on the evidence from the transcripts, it could be argued that while the company is focused on transformation through developing as a learning organisation, it is still mainly a top-down approach.

But it's not all negative. From the workers' point of view the introduction of competency-based training has meant that their skills are being recognised, often for the first time. Workers who previously had not considered any form of training now saw that a pathway was available and achievable. They could talk to others about their progress on the matrix and how their training might be extended. For the first time, some project workers had received a certificate and several informants commented on the difference this made in terms of self-confidence.

So, for some workers, gaining qualifications is transformative. The opportunity to be part of a team, to be engaged in decision-making (albeit with constraints) has on the whole been greeted enthusiastically. They know that the bottom line is to make a profit, to be efficient, safe, and not damage the environment but most comply willingly. As one of the leading hands pointed out,

> You've got to have a certain standard that you're meeting with your workforce. If you
> haven't got that standard there, then you get a lot of re-working. You have to spend more
> time relaying the instructions and it all comes back to time management

This then relates to workplace communication. We have already seen how each employee from project manager to leading hand, is encouraged to contribute to workplace activities but must 'sign-off' as accepting individual responsibility. In terms of worker literacy, this is not only about being able to participate successfully in what is considered a learning organisation but there are also socio-legal implications. For Constructco, literacy is seen as an enabling skill, useful to maintain the social order of the workplace. For example, the Systems Manager, when commenting on the need for good communication skills, suggests that

> …*good communication skills still remains a core basic requirement for a good outcome, and
> we've got things like Work Activity Briefings, Job Safety Analyses that we do. We record or*

document those, and more and more we're trying to thrust that responsibility back down the workforce, to the people that carry out the work.

So, on the one hand there is a need for good communication skills but on the other hand, earlier in the interview the manager had stated that there was a greater need for 'practical' skills in the workforce. Paradoxically, at a later stage in the interview, the manager argued that *'back down the workforce'* workers require literacy and numeracy skills. He described the situation as *'frightening'* and how you *'have to be selective'* because "*a lack of literacy and numeracy skills will put a platform on on just how far you can go*". Lack of literacy skills was also seen by the Project Training Officer to be a concern in relation to accountability. "*...the more and more we ask people to fill out forms because of safety and environmental legislation etcetera, etcetera, and quality assurance as well, I think we'll really open up a can of worms*". He also referred to "*handpick*[ing] *our own workforce*", that is, using written assessments as a screening measure. If workers "*struggle to put their thoughts on paper*", they will take "*too long to do training*". Further, "*these guys have to fill out and sign dockets and all that sort of thing. You tend to pick up quite quickly who's literate and who can't do the job*". In these extracts from interviews it is apparent that there is a slippage between communication as a social practice and the necessity for workers to have the basic skills of literacy and numeracy in order comply with audit requirements and to progress with training. There is also a tension between the stated objectives of becoming a learning organisation and the "*accepted evil*" of having to "*teach these people how to read and write*".

From the above, it appears that the Project Training Officer espouses a deficit view of the literacy skills of his workforce. His focus is on the apparent lack of basic reading and writing skills required to accomplish certain workplace tasks. However, it is also clear from the talk of the Training Coordinator that an autonomous view of literacy relates to other core values such as cost effectiveness.

> *I mean we've spent x amount of dollars developing all these training manuals, it's no good if 90% of the guys out there can't read and write, is it? You've wasted your time and money. ...The first round were paper based, book based, now we're starting to get them on CD Rom...all that sort of thing.*

It can been seen from this excerpt that literacy is perceived to be an autonomous skill which a worker requires prior to training – the 'bolted-on' approach referred to earlier in the chapter. Further, the crucial role of literacy in relation to workplace health and safety, and assessment of risk, is indicated in the following extracts from interviews.

> *Pre-Start Checks for equipment. A bloke gets on a dozer in the morning, he does his pre-start bla bla bla and away he goes. Now again if he has literacy problems, is he actually understanding what is suppose to be in there or is he ticking the box so it keeps him out of trouble? [Training Coordinator]*

But it is not just a question of de-coding or "*understanding what it says on paper*". In the 'high performance' workplace the bottom line is getting the job done, right the first time, safely, thus reducing costs. In Freebody & Luke's (1990) terms, workers are required to go beyond being 'code breakers', they must be proficient 'text users', knowing how to read a range of texts for different purposes, as well as being 'text participants', able to contribute to the Work Activity Briefings with the engineer, project manager and other team members. So, from an ideological perspective, literacy is also about being able to participate successfully in what is considered 'workplace communication'. It has been shown that together with the company focus on developing a training culture, there is also a strong emphasis on workplace communication as a means of ensuring that everyone working on a project is fully informed about the project and each employee from project manager to project worker, is encouraged to contribute to the discussion. The activites documented in Table 1 are examples of how workers are 'socialised' into specific

workplace practices and we have seen that these literate practices are recognised by the Systems Manager as 'communication skills', "*Communication skills still remain a core basic requirement for a good outcome*". Further, these practices are recognised by supervisors and management as important elements in quality assurance, risk assessment and in developing as a learning organisation. However, the literacy skills and practices involved are either assumed or neatly glossed under the generic competence *'Carry out interactive workplace communication'*. So, although literacy and numeracy training occurred in relation to industry competencies, the literacies required to participate in workplace activities and auditing processes were not addressed. As a result, workers needed to be mentored in order to understand and use the appropriate social literacies which were required for successful engagement in work practices, including workplace communication meetings. Further, it is contended that additional literacies would be critical to the maintenance of the social order within the workplace. As 'text analysts' (Freebody & Luke, 1990) workers will be reflecting on their new roles within the learning organisation, as a team member, problem-solver, or workplace mentor, or perhaps their position in relation to the company values.

With the move towards developing a learning culture within the workplace there is a necessity for all workers to engage in a range of communicative activities and learn new literacy practices. The implementation of new structures has resulted in increased responsibility being pushed on to the individual worker, while at the same time, increasing the audit/paper trail of accountability. Constructo has adopted the discourse of 'empowerment' and 'developing a learning organisation' where everyone has a role and aims 'to be the best they can be'. But while this may appear to be transforming it can also be constraining, as with this new discourse comes the increased responsibility for productivity, safety and accountability. It is also noticeable that alongside the 'enchanted' language, exists the negative, horror discourse of illiteracy: being "*frightening*", "*an accepted evil*", a "*threat*", or like "*opening up a can of worms*". This discourse represents the dark side of fast-capitalism. Entry-level workers who "*struggle to put their thoughts on paper*" or [il]literate subcontracted and hired labour are positioned as being of little value to the company. In turn, this will result in increasing numbers of second class workers or an underclass of the unemployed. This is not to say that lack of literacy causes unemployment, but that the new high performance workplaces which demand just-in-time efficiencies, productivity and accountability are also sites of increased textualisation. So, not only do workers require the enabling underpinning literacy and numeracy skills to access and engage in training, they also need to be proficient in the literate practices associated with the new work order. It must be recognised that these essential literacies play a crucial role in the socialisation of workers into the communities of practice and the distributed literacy knowledges valued by members of the Constructco Discourse. Further, they can only be acquired through enculturation or 'apprenticing' (Gee, 1990) employees into the discourses of the workplace. Workplace learning, both informal and formal, is at the heart of this process.

Conclusion
It has been argued that the new high performance workplace is characterised by a bureaucratic system of top-down control while at the same time adopting the discourses of empowering workers through becoming a learning organisation. Further, there is an apparent contradiction between codifying, measuring and auditing skills and knowledge, and rewarding workers with their skills passports. There is also a similar paradox in empowering workers to make decisions as participants in 'people focused activities', which are related to the implementation of pre-designed company policies, while at the same time requiring them to be self-regulating and legally responsible for their actions. Gee and Lankshear (1997), argue that the response to global economic pressure is to produce 'cleverer' workers who have developed high-order thinking skills, situated expertise, the ability to problem-solve and 'learn to learn', and who are therefore economically more productive.

> The logic of the new work order is that the roles and responsibilities of the middle [management] will pass
> to the 'front-line workers' themselves... Workers will be transformed into committed 'partners' who engage
> in meaningful work, fully understand and control their jobs, supervise themselves and actively seek to

improve their performance through communicating clearly their knowledge and needs. (Gee & Lankshear, 1997: 85)

While this company appears to be moving towards a collective vision - the development of a learning culture, based on the valuing of new forms of 'human capital', this is explicitly linked to the necessity for improved, visible outcomes for the company. Some workers appeared to be pleased that their skills were being recognised formally, however not all were convinced about participation in the reorganisation of work. As a result there is still a question over whether workers' lives, or individual 'selves' have been or will be transformed.

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