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TALK AND TEXT IN THE ORGANISATION OF PRODUCTION :
PERSPECTIVES OF A "NEW CAPITALIST" WORKPLACE IN
CAPE TOWN.

by

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the requirements for the degree of Master of
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Declaration :

This work has not been previously submitted in whole, or in part, for the award of any degree.
It is my own work. Each significant contribution to, and quotation in, this dissertation from
the work, or works, of other people has been attributed, and has been cited and referenced.

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2001. 09. 13.

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ABSTRACT

This thesis is a study of the literacy practices that characterise the communicative and productive processes at a automotive product manufacturing plant in Cape Town, South Africa. This shock absorber factory is consciously structured as a “new workplace” where the focus in production is on “flexible specialization” that allows quick shifts to be made between product lines where the focus in the social relations of work is on devolution of responsibility to individual employees and cells as organizational units of labour, interchangeable tasks and enlarged scope for workers to participate in decision making.

This study was influenced by the work of Hull and others (1996). It explores the notion that work, and work practice at such sites has become “discursive”, “textual”, or “literate” (Farrell, 2000) through the review of the routines, interactions and interview statements of workers and supervisors at three “cells” at the factory.

The study, which was ethnographic in nature, was approached from the position of listening to “other people’s stories” (Prinsloo and Breier, 1996) and conceptualized as “telling cases”, demonstrating how workers take hold of literacy in this workplace. The recurrent instances of events were tape-recorded and/or recorded in detailed field notes across a selection of activities within the workplace, and through the information collection, I was able to generate and test assertions as well as seek confirmations and disconfirmations of evidence amongst the various items of data. A tool which I found very useful for this exercise was Hull’s (1996) taxonomy of literate functions.

Starting from Mikulecky’s (1980) identification of workplace literacies as “reading to do”, the study shows how deeply implicated literacy practices are in the wider dynamics of work and social relations in the workplace and confirms the notion that workers who have developed a literate identity means that they are able to “dip appropriately and as needed into a wide and deep repertoire of situated ways of using written language and other forms of representation in order to carry out a work related activity” (Hull and others 1996 : 204)

The aim of the study is thus firstly to explore the extent to which literacy practices influence “worker empowerment”. Secondly it attempts to identify the literacy requirements that workers need to operate in a new work place environment, and lastly it attempts to sketch worker perceptions as they engage with the new ways of work and its associated literacy practices.

Abbreviations used in this Report :

SoUL	-	Social uses of Literacy
BICIT	-	Best in Class Improvement Tools
TQS	-	Totals Quality Systems
OEM	-	Original Equipment Market
BOS	-	Business Outcomes Standards
KPI	-	Key Performance Indicators
B's and C's	-	Benefits and Concerns
AM	-	After Market
EI	-	Employee Involvement
MD	-	Managing Director
PPM	-	Parts per Million
COP	-	Cost of Production

Chapter 1

1.1 Introduction

This thesis describes ethnographic research into literacy and work in a South African shock absorber factory and focuses on how front-line workers deal with the major shifts in literacy practices which are currently unfolding in restructured workplaces around the world. These shifts have been variously referred to as “post Fordist”, “post industrialist”, “fast capitalist” or, as in discussions of workplace organisation, the “new work order”. (Gee, Hull, Lankshear, 1996) Which ever term is used to describe them, these phenomena manifest themselves in workplace settings as multi-dimensional and consist of complex contexts and practices in different and shifting configurations.

I situate this thesis with reference to the debate whether work practice in the “global” workplace is becoming more textual, discursive or “literacy-rich” and investigate some of the effects which these new work order practices have on local work settings. Over a period of five months on the factory floor, I observed the literacy practices of three work teams or “cells” as they are known in the factory.

This thesis is presented in the form of three case studies of interactions over work and text on the same factory floor, each presenting a different perspective on the working environment. The first case study focuses on the problem- solving abilities and the uses and limits of authority in relation to textual practices which a woman team leader experiences. The second case study focuses on the literacy demands placed on workers as they interact in an employee involvement meeting. The third case study focuses on the literacy practices that are part of a conflictual interaction between two teams or cells.

Having identified aspects of literacy practices in relation to new workplace practices as they unfold at the factory, I conclude this thesis with brief comments on my findings.

1.2 Location

The research was conducted at a factory that manufactures shock absorbers and related automotive components. The factory is situated in the southern suburbs of the Cape Peninsula and its parent company has its head office in America. It has been almost four years now since the South African operation started implementing new work processes in order to align themselves with the other plants around the world. The factory is surrounded by townships housing predominantly Coloured¹ people from which it draws a major part of its workforce. A brief background to the company is sketched on page 21 of this thesis.

1.3 Rationale

Over the last two decades major changes have been taking place in workplaces. Globalization and technology are transforming work. Castells (1999) provides his views on globalization and how it articulates itself in the following way:

In the last two decades of the 20th century, a new economy has emerged throughout the planet. It is certainly capitalist. Indeed for the first time in history the whole planet is either capitalist or highly on capitalist economic processes. But it is a new brand of capitalism, characterised by three fundamental features : productivity and competitiveness are, by and large, a function of knowledge generation and information processing; firms and territories are organized in networks of production, management, and distribution; and the core economic activities are global, that is they have the capacity to work as a unit in real time on a planetary scale.

(Castells M ; 1999 : 1)

Castells makes the point that while the process is very uneven around the world, working to the advantage of some regions and individuals, and against others, it is nonetheless global.

Because of fierce competition on the global markets, firms have become aware of the cost of productivity. In addressing the problems associated with the costs of productions, these globalized firms settled on a "solution" to reorganise work around decentralised management, work differentiation and customised products, " thereby individualising work tasks and differentiating individual workers in their relationship to supervisors and employers." (Carnoy M, Castells M, 2000 : 5). (Gee, Hull, Lankshear, 1996) also claim that in order for workers to function

¹The term Coloured refers extrinsically to people of "mixed race" in the South African context, as distinct from "White", "African" or "Black people" and "Indian people". More specifically, it is usually used with reference to a group of people also known as "Cape Coloured", living mostly in the Western Cape, who have a common outward and linguistic identity. These terms are historical and social categories, rather than absolute categories of racial origin.

and succeed in the restructured workplace, the workers need to possess the fundamental qualities of flexibility, differentiation and individuality. They claim that workers who possess these fundamental qualities, “create new social identities” and become “new kinds of workers”:

- *flexibility* - Workers themselves are required to be functionally flexible and multi-skilled so that they can perform a broader range of tasks and rotate their responsibilities.
- *differentiation* - Workers are no longer exposed to assembly line mass production principles, but are now shifting to accommodate forms of production which employ new ways of making different goods and commodities by changing production processes.
- *individuality* - Worker autonomy and the need to create a sense of community within the workplace is encouraged. In this environment workers are empowered to think and act on their own, take risks and value their place in the organisation.

(Gee, Hull, Lankshear, 1996 : i - ii)

By individualising and differentiating workers, employers can now utilise sub contracted, part time and temporary labour, since much of the work processes can now be narrowed down to specific tasks. These tasks can be carried out in teams which ideally are multi-skilled in their new functions. Along with this change, is the effect that workers are gradually being defined socially, less by a particular job they hold than by the knowledge they have acquired by studying and working. This allows the workers to build a “knowledge portfolio” which allows them to move across firms and across types of work, becoming an “empowered worker”(Gee, Hull, Lankshear, 1996).

This thesis aims to explore the association between “worker empowerment” and the literacy practices in this particular “new work place”. The question is asked : “To what extent are workers empowered as a result of their literacy practices in this new work place?”

1.4 Conceptual Framework

The notion of literacy as embedded practice associated with the “New Literacy Studies” (Gee 1990; Street 1995) provides resources for the study of literacy, particularly within the workplace setting. Current literacy theory (Street, 1995; Barton, 1994; Gee, 1990; Gee, Hull, Lankshear, 1996) emphasises the notion of context, which suggests that literacy learning must be understood as part of the larger historical, social and cultural milieux. Literacy is thus described as a set of socio-cultural processes varying within and across groups of people and settings. Or put another way, literacy should be understood as a social practice, so that in the study of literacy,

“...the focus is not just on what people *do* with literacy, but also their *understandings* of what they do, the *values* they give their actions, and the ideologies and practices that encapsulate their use and valuing of literacy”. (Prinsloo and Breier, 1996:24)

Rather than a set of decontextualized skills, literacy can be viewed as a range of practices *specific to groups* and individuals of different cultures, races, classes and genders.

(Scribner and Cole, 1981; Street, 1984 in Hull 1996; Barton, 1994; Prinsloo and Breier, 1996).

Until the study of Hull and others (1996), the study of literacy practices from a socio-cultural and cognitive perspective in a *workplace setting* had been thin. As workplaces are becoming more diversified, drawing upon ethnically diversified populations, as work is reorganised, giving workers more responsibilities (Hull, 1991; 1996; Scheeres, 1999; Farrell, 1999); and as work is becoming more technologically sophisticated, requiring workers to draw upon “intellective” in addition to “sentient” knowledge (Farrell, 1999), new work practices and therefore new literacies are likely to emerge. A socio-cultural and cognitive perspective is needed to best understand literacy in these increasingly complex workplaces.

1.5 Methodology

Every organization is composed of a variety of different but connected narrative descriptions of itself. Telling and hearing the stories that make up these descriptions is important because they help specify what is valuable to the people in and around the organization.

Human beings, to a large extent, create meaning and understanding through narratives - through stories. For most of us the telling, hearing, experiencing and elaboration on our own stories (i.e. our individual identities) is a relatively effective process that results in a usually coherent self-story (identity) that persists through time and is able to adapt to change. These personal stories more often than not, are an expression of personal needs, goals, and emotions.

My approach to this study is one of listening to "other peoples stories" (Prinsloo and Breier, 1994) and focuses on specific "literacy events", a concept which has been developed by Heath (1983), where she shows the different and diverse results of literacy practices and communication as they are influenced by the culturally specific contexts of the learners. This concept of "literacy events" was further expanded by O'Connor (1994) in the workplace in the form of "workplace literacies" and later by the work of Hull and others (1996) as "work events".

Using a socio-cultural perspective to understand literacy at work, I studied how workers engage in literacy practices associated with their work.

Rather than using a survey-based "grand tours approach", which can result in a limited and distorted view of both workers and management, I used the ethnographic approach, which allowed me closer contact with the sample population and a clearer understanding of the literacy processes being played out. The studies are based on detailed narratives and representations of the self, elicited from workers in unstructured interviews and on recorded instances of workers communicating with each other and with managers in the course of their work. This allowed me to experience and see the dynamics and relationships of literacy practices which are context specific to the research site. The material is conceptualised as "telling cases" (Prinsloo and Breier, 1996), which demonstrate how workers take hold of literacy, in this particular workplace, that are consistent with local understandings and social practices.

By collecting recurrent instances of events across a selection of activities within the workplace, I was able to determine a range of variation in both the social organization of the workplace and in the perspectives of the workers and management. Through this information collected, I was able to generate and test assertions through a systematic search of data recorded, seeking confirmation and disconfirmations of evidence as well as looking for key linkages amongst the various items of data.

1.6 Focus

The process of workplace restructuring at the research site, which I will refer to in this thesis as “Strongarms²”, has already advanced to the stage where the workforce is divided into work teams, each with their own team leader. Each work team has as support, a facilitator (he could have more than one team to facilitate, and his primary function is to see that the work processes are running smoothly) and a manager (he could also have more than one team to manage, and his primary function is to see that production levels are maintained). Management perspectives will be elicited from both the manager and facilitator.

For the purposes of this study I have identified 3 teams, each the focus of a case study:

- **Chapter 2** - Team A - consists of 3 members. The team leader is a woman, the other members are a male and female.

I chose this team because it was the smallest team in the factory, with the only woman team leader in this section of the factory.

In this chapter I investigate text based practices with regard to the limits of authority in which the team leader is allowed to operate and perform her duties, and the constraints and stresses associated with these limits of authority. I also investigate the “value” of her “working intelligence” (Lankshear, 1997) in her work place setting. From this I develop an overview in relation to:

- * her problem-solving practices;
- * her capacity to articulate her problems with regard to authority and responsibility;
- * her skills in understanding her machines and their functions and how to articulate

² “Strongarms” is not the real name of the company, but rather a pseudonym which I will use as reference to the company throughout this thesis.

problems in a technical manner through reporting and trouble shooting;

- * her capacity to resist and assert authority;
- * how much she values job satisfaction and her commitment to quality products.

- **Chapter 3 - Team B** - consisted of 14 members. The team was made up of 2 men from the black race group, 2 women from the coloured race group, with the remaining 10 all being coloured men.

I chose this team because it was the biggest team in the factory, and by observing their literacy practices I wanted to establish whether the bigger cells experienced the same problems as the smaller cells in the factory.

In this chapter I focus on the literacy demands that are placed on workers when they engage in an employee involvement meeting.

- * I examine what the expectations of the company are regarding their employee literacy requirements to participate actively in these discussions;
- * I develop an analysis of the language usage and code-switching which occur;
- * I use the concept of a “social language” to explain the hybridised language and develop an account of what literacy workers need to function optimally in this workplace;
- * I examine how the concept of “self surveillance” affects both the individual worker and the team as a whole, and how it is embedded in the new literacy practices of the workplace;
- * I make a comparison of the standard meeting format with team members and practices; and
- * I explore the constraints which the team experiences in producing solutions to their suggestions made at Employee Involvement (EI) meetings.

- **Chapter 4 - Team C** - Consists of 8 members and all are coloured men.

I chose this team because this is an average size team for the factory, and all are of the same gender and race grouping. In this chapter I focus on the process of identity formation

on the part of the cell workers , in the context of contestation and conflict between the day and night shifts. I study the language / literacy that characterises this conflictual interaction between the teams with reference to what Gee (1992) termed “borderland discourses”.

1.7 Data Collecting Instruments

The field work was conducted over a period of five months. April- August 2000, and the following procedures were used as instruments to gather data :

- Systematic observation of the literacy events in the workplaces which were recorded in field notes.
- Interviews with workers of the 3 teams about their work and the role of literacy in their work, primarily tape recorded and transcribed.
- Observation and recordings of meeting literacy practices, especially EI (Employee Involvement) meetings by way of tape recordings and field notes.
- Observing of literacy practices during actual work processes and documenting them by using tape recordings and field notes.
- The collection of pertinent documentation relating to specific literacy practices.
(See Annexures)

A condition for this study, made by management, was that no video cameras or still cameras were allowed into the factory.

1.8 Analysis of Data

In line with the socio-cultural and socio-cognitive perspective Hull et al (1996) which guided this research, my intention was to construct a holistic picture of the workplace. It is my intention that this picture includes the way that literacy and work are embedded within a socio-cultural setting. Hull et al (1996) used this method of analysis extensively in their study) This method involves focussing on the interactions and actions contributing to accomplishing a task at work. The activities that I focus on are the literacy contributions workers and management made at EI meetings as well as the moment when the production line was switched from one product to the next, as this is the time period when most workers are engaged in work related literacy practices. Such moments and the texts and social interactions that comprise them, along with the rules and strategies that govern those interactions, I will treat as “work events” for purposes of study here Hull et al (1996)³.

To organise the data I made use of Hull’s taxonomy (1996 : 276) of meta categories of literate functions and adapted it to suit local conditions and circumstances.(See Annexure 6)

1.9 Literature Review

“Contrary to popular opinion, workers don’t just need the “basics”, whether those basics are cast in a traditional mold of readin’ writin’ and ‘rithmetic or re-cast as “higher order thinking skills” or other decontextualized competencies listed on various skills lists” (Hull and others ,1996)

The above are some of the concluding thoughts that Hull and her colleagues expressed after their study of electronics factories in Silicon Valley. This study confirms her findings of 1991 which indicated that the current literacy demands placed on workers required them to have “basic skills” to function effectively in a “ restructured workplace”. However, the problem is that the “basic skills” to which she refers are not the accepted abilities that a worker displays in order to perform a simple and fundamental task of decoding or encoding a short text within a specific task or engaging in elementary calculations such as addition and subtraction. Hull contends that “basic skills” are now expanded to include the more complex competencies for an information age and in a reorganised workplace (Hull, 1991). Not only is it a requirement of workers to effectively

³ Hull developed the “work event” to mean any work - based interaction or process. The silent process of shock absorber assembly also constitutes a work event.

engage in reading, writing and arithmetic, but they are now also required to demonstrate their ability to engage in problem solving, team work and quality assurance, competencies that require “nuanced judgement and interpretation” (Resnick and Klopfer 1989).

As this study will be focussed on the literacy practices and learning of workers in a “restructured workplace” in South Africa, this review will attempt to cover the field of literacy with respect to:

- 1.9.1 Models for the study of literacy.
- 1.9.2 A brief overview of the “restructured workplace”.
- 1.9.3 The restructured workplace internationally.
- 1.9.4 The restructured workplace locally.
- 1.9.5 Literacy in the workplace - a local ethnographic perspective.

1.9.1 Models for the study of Literacy

“The view on literacy, when only perceived as simply the technical skill of coding speech and decoding print and socially dislocated from any context, is deeply problematic. This traditional perception allows that literacy be treated as an autonomous, asocial, cognitive skill with little or nothing to do with human relationships. This view of literacy more often than not cloaks literacies’ connection to political power, social identity or a certain ideology which often is in the service of privileging certain types of literacies or certain types of people.”

(Gee 1990 :40)

Street (1984; 1993; 1995) called the model of literacy that Gee refers to above an “autonomous model”. He argues that in the “autonomous model”, literacy is seen as a technical skill and is generally conceived as something happening inside the head of an individual. According to Street, viewing literacy from an autonomous perspective presents only the viewpoint of one subculture and that there are in reality varieties of literacy practices, carried out in different domains. (Barton and Ivanic (1991) in Bourne,1996). This model also assumes that literacy is universal across cultures as well as being politically neutral. Proponents of the autonomous model of literacy value literacy as they perceive “it” to have positive consequences for cognitive development, which is also considered to follow universal patterns associated with “progress”, “civilization”, “individual liberty” and “social mobility” (Bourne, 1996).

As an alternative to this way of perceiving literacy, Street proposes his “ideological model”, where he argues that literacy should not be seen as a fixed set of skills, but that new and different skills and practices emerge across varying contexts and domains of knowledge. Proponents of this model of literacy, concentrate on the specific social practices of reading and writing and therefore recognise the culturally embedded nature of such literacy practices. This model stresses the significance of the socialization process in the construction of the meaning of literacy for participants and is therefore concerned with the general social institutions through which this process takes place and not just the specific “educational” ones.

Barton (1994) also acknowledges the value of the social institutions through which literacy takes place, and draws our attention to the “ecology” of literacy practices. He proposes that the different literacy practices such as reading, writing and speaking be studied in relationship to one another within a society. When highlighting these relationships that literacy practices have with each other, he concurs that certain practices have dominance over others, thus creating “dominant and marginalised literacies”.

Freebody and Luke’s typology as a model for literacy provision, is particularly appropriate in this context. They see literacy learning in their model as being that of acquiring competencies in the context of their social roles. (Luke (1993) in Prinsloo, 2000)

These competencies are:

- Coding Competence - learning your role as a code-breaker/ maker, including knowledge of the alphabet and the relationship between spoken and written symbols, and the contents of that relationship. These are necessary but not sufficient conditions for using literacy for particular social functions in actual contexts.
- Semantic Competence - learning your role as a text participant, which requires an awareness of how the varying, socially shaped genres of meaning making that are operative have been brought to play to give meaning to specific texts.
- Pragmatic competence - learning your role as a text user, that is developing and practising social and sociolinguistic resources for participating in a range of contexts.
- Critical Competence - learning your role as a text analyst, including a concern with how texts construct and represent the world, and how they position and construct human objects.

Freebody and Luke claim that these “competencies” are not graded in terms of “lower” and “higher” order skills, or taught sequentially, (Prinsloo, 2000) but that a relationship of “dominant” and “marginal” develops between these competencies when learning takes place.

More and more the concept that learning is primarily a process of internalization of knowledge is being questioned. Vygotsky’s (1978) work in this realm established that learning take place when learners move within the “zone of proximal development”.

In contrast to the concept of learning as the internalization of knowledge, Lave and Wenger (1991), following on Vygotsky, argue that learning concerns the whole person acting in the world. They term this type of learning as participating in “communities of practice”. Accordingly they proposed that competence in learning is obtained within a community of practice when :

“.....members are bound together by the collectively developed understanding of what their community is about.....secondly members build their community through mutual engagementand lastly when members have produced a shared repertoire of communal resources - language, routines, sensibilities...stories styles etc.....”

(Wenger, 2000 :229)

They concur that learning is done within this community of practice, when the emphasis on learning is placed on the relational interdependency of agent and world, of thought and action, of persons-in-activity. They propose a system of apprenticeship learning (also Rogoff, 1990) which favours a situation of learner and mentor or team member and coach. Central to the approach of learning by apprenticeship, is that value and emphasis is placed on the setting where the learning takes place as this creates strong goals for the learner as well as context value to the learning. Learning within communities of practices, which is predominantly characterised by learning by apprenticeship, also provides for identity development which occurs through negotiation and renegotiation of learning material with peers and mentors in a specific social setting. Learning within communities of practice strongly advocates active participation by all, which is very conducive to the development of “tacit knowledge”. According to Gee, Hull, Lankshear, 1996, “tacit knowledge is not stateable, but learnable only through immersion in communities of practice” (1996 : 66). The premise underlying new work practices, then, is that every worker builds

up knowledge about his or her job that they learnt through active immersion into the community of practice of the new work processes. In order for the firms or businesses to capture this knowledge and make it accessible to others and the organization, they need to devise systems that will allow these “empowered workers” to distribute the knowledge across people and technology in such a way that no individual has any monopoly of it alone, but rather, each person functions as part and parcel of a “knowledge system”.

1.9.2 A brief overview of the “Restructured Workplace”

Many of the early experiments by trade unions and researchers to improve the quality of working life, looked at team work to provide this quality. In response to this call by the trade unions and researchers, the “Human Relations School” of the 1920's and 30's who sought to overcome the effects of Taylorism and job fragmentation, recommended to employers to “recognise the contribution of their employees”. This led to the “team” concept being formulated, and despite the attempts by some unions movements to promote participative work, teams only became “fashionable” when managers saw the competitive benefits that this sort of work organization gave the Japanese car industry. Taiichi Ohno, a production engineer from Toyota, studied the American car industry and identified ways in which the traditional system of mass production could be improved by overcoming inherent limitations (Lloyd,1994). From his conclusions he formulated the “Lean Production System”, which has as its principles the following:

The Principles of Lean Production (Lloyd 1994) consists of :

- ***Kaizen***, or constant improvement of the production process, the utilization of workers’ ideas and suggestions for improving the production process, through mechanisms like quality circles.
- ***the application of stress***, via the “Just-in-Time” delivery of parts, the “zero buffer” system(which eliminates the reserve component stock near the production line) and the incessant removal of “waste”, including workers that are not working at full capacity. Lean production therefore aims to make potential improvements or unused resources visible.
- ***Total Quality Management***, based on building quality in first time rather than rectifying faults, and locating sources of defects in the teams, individuals and machinery responsible for them. This system is usually

underpinned by “Statistical Process Control”, which involves workers themselves keeping statistics on quality, scrap rates and so on. This in turn requires devolution of some middle-management functions, which is the phenomenon that has led some researchers to welcome lean production as democratic.

- *team-based work organization*, providing limited multi-skilling and peer group pressure and surveillance.
- *short cycle times* and highly standardised work
- precise team and individual evaluation, and *performance related pay*
- an unrestricted *ability by management to allocate workers* to sections of the production process at will.
- *a number of “social” components*, including the nenko system of lifetime employment, internal labour markets, plant specific training, little labour mobility between firms, a highly segmented labour market and enterprise unionism. (Lloyd, 1994 : 8)

Focussing on the team work concept, which lies at the heart of this study, (Lloyd,1994) identifies team work as having two fundamental dimensions. Firstly, work is organised by placing responsibility for a particular part of a labour process in the hands of a group whose members can help each other. Secondly, the team concept is used to develop a new “workplace culture” in which workers think of themselves as part of a “company team” with the same goals as management. Changing the language of work is an important part of the strategy of the “restructured workplace”, whether within the teams or other aspects of the organization. Workers are now “employees”, they no longer work in factories or offices but in enterprises; and they are managed by team leaders and facilitators and not foremen. Changes also include the elimination of the language of politics and conflict, which is replaced by vision and “mission statements” (Lloyd,1994).

“The world over, where governments are subscribing to the global economic market, workplace changes are experienced. We are living through a period of dramatic global economic change as new business and management theories and practices emerge across the developed world” (New London Group, 1996).

This statement from the New London Group has now become “old news” in modern business practices as the emergence of these new practices has already given birth to the social practices which are synonymous with these new business discourses. Issues of empowerment, flexibility and identity face workers as they are now expected to do so much more. More and more demands are

placed on the literacy skills of workers, in terms of record keeping, recording information, pulling information out of different sources, solving problems and working collaboratively with other workers, and so on. Research in the US has indicated that the workplace has become complicated to the extent that companies are finding it difficult to find suitably qualified workers to handle these “new” jobs. (Hull, 1991)

1.9.3 The Restructured Workplace Internationally

Lots of research is currently being undertaken especially in the United States (see website <http://nvcv.berkeley> - Berkeley University) to understand the effects which the restructured workplace has on various aspects of learning and society. Gee, Hull and Lankshear (1996) explored the effects which the training of work teams had at a factory in Silicon Valley, as well as the (dis)connectedness of a village in Nicaragua affected by fast capitalism. Their study highlights the literacy practices and reconstruction of worker identity which fast capitalism enables. Workers at the factory increased their accuracy at their tasks, and since the advent of work teams and the new systems of reporting and monitoring were implemented, they had started to conceptualize their work differently. Evidence found by the researchers concerning this improvement, was directly linked to the manner in which their workplace had been restructured. However the positives associated with these improvements were belied by an underlying tension between the workers' local day to day goals at work and the larger “global” goals of the company. Quality, management and targets seem to have been the main culprits for this tension. Fast capitalist goals and competitiveness are also the reason for misery at the traditional family broom making business in Nicaragua. This business had a long history of producing hand-made brooms for the local market. The market for their products was good, and the business could be sustained for many years. All this changed when a new government was elected. The new government opened its consumer market to imported lines which created a flood of products onto the markets at relatively cheaper prices. The effect of this was devastating to the family business, as their “local” products were driven out by their global competitors. Another casualty on the ever growing “injury list” of fast capitalism, an injury list that is well camouflaged by the economics of the day.

Lankshear (1997) focussed on some of these business features driving fast capitalism and summed it up as follows :

“Business refers to a gamut of values and characteristics associated with the preferred institutional style of (so called) leading-edge, profit driven organizations. These include such ideas as qualities as being “cost effective”, “lean and mean”, “quality controlled”, “focussed on the bottom line”, “value adding”, “competitive edged” and committed to uniform standards across all sites of activity. Organizations of this type value “transferability” (of knowledge, skills and expertise), emphasise “accountability”, privilege “competitiveness” over time on the job and insists on “audit trails” as means of verifying “performance”. They are oriented towards quantifiable outcomes, subscribe to a “portfolio and project” approach to life and generally prefer individual enterprise agreements to collective awards and bargaining at the point of hiring..” (p 314)

Workers who operate in businesses subscribing to the above features find themselves constantly adapting and checking their performances against set standards and norms. This implies that they should possess the capacity to reconstruct their identity in line with this techno-rationalist approach to business, meaning that workers should be able to function in an environment where their human goals and values are broken into material tasks, categories, processes etc, and their competencies are packaged into measurable and observable behavioural objectives and outcomes. In essence, a “reconstructed worker” is needed in a “reconstructed workplace”.

Farrel (1999) highlights the dilemma in which “reconstructed workers” find themselves in adapting to the way of working at a “reconstructed workplace” in Australia. She contends that the effects of globalization brought about vast technological, informational and social changes which are effecting the lives of many Australians who work in reconstructed workplaces. She believes that the effects are most strongly felt by those workers who had previously been engaged in a traditional Fordist workplace and now find themselves undergoing a metamorphosis in both the workplace and their social environment.

She concludes from her research that work practice has become a matter of learning to manipulate words, icons and other signs (Castells 1999; Gee et al, 1996), and that this experience is intimately connected to social change which has the effect of “reconstructing” a “new type” of worker. Scheeres (1999) re-echoes the sentiments of Farrel (1999) that workers are in the process of reconstruction, and highlights the fact that these workers are struggling with the new ways of “being” and how the organization expects them to “be”. She contends that confusion exists amongst the workers regarding the nature of their status and power within the new work place setting. A key contributing factor to this confusion is the relationship and subjectivities between these workers and the organization, as both parties are still in the process of reconstructing

themselves.

Similarly, work has been undertaken by Hull and others (1996) in their comparison of the literacy practices in a traditionally organised workplace and that of a restructured workplace in the US. They too concluded that workers undergo a socio-cultural change when engaged in work practices conducive to a restructured workplace. They proposed that management of such institutions ought to understand *their* specific workers and their literacy needs and to respond to and understand the culture(s) of these workers as this could alleviate the confusion which clouds their understanding. Another key issue is that literacy provides the scaffolding in which work gets done and that literacy practices are connected to power. To this extent it was found that participating in a literate activity was not a question of ability, it was rather a question of rights and opportunity. Hull confirms previous work done by herself (1991), that workers don't just need the "basic literacy skills", whether traditional or recast higher order thinking skills. Conclusive evidence was found that workers used literacy for all aspects of their working situation. These workers acquired the ability to dip appropriately and as needed into a wide and deep repertoire of situated ways of using written language and other forms of representation in order to carry out work related activity(p 204). A pitfall from a literacy dimension is that while organizations claim to empower their line workers, they generally continue to maintain traditional roles and relationships between workers and management; this has the effect of constructing hierarchy, and hierarchal structures constrain literacy practices (Gee, Hull, Lankshear, 1996).

1.9.4 The Restructured Workplace Locally

South African management has evolved in an economic vacuum largely unexposed to the cold winds of reality of international trends. Earlier industrial policies were based on protection from the overseas market, effectively insulating our industry from serious price or quality competitiveness. Apartheid labour practices, gave capitalists access to an artificially cheap labour resource which “blinded” employers to the rising labour prices that most manufacturing countries were experiencing (Lloyd, 1994). The result of these labour practices were that companies were not investing in reorganising work processes, skills improvement and technology. More and more employers became aware of these international labour practises, largely due to the growth of unionism and re-emergence into the world trade markets after the democratic elections of 1994. This experience, together with the culture of “empowerment”, has engendered the onset of the “restructured workplace” in South Africa. A move to address and implement the “theories of the restructured workplace” is underway with the establishment of a company in the Western Cape known as BICIT⁴. The company offers to teach local manufacturers the principles of the lean production system in a local and “Africanised” way (local newspaper -Cape Argus 27 May 2000). Very little or no research work has been done in the field of the restructured workplace in our country, however the climate and conditions to explore this area of society is ready for in-depth inquiry.

1.10 Literacy in the Workplace - a Local Ethnographic Perspective

As previously mentioned, research into literacy practices within the context of the “new work order” in South Africa, has not been done before, however situated literacy practices in South Africa are well documented in the SoUL research project.(Prinsloo and Breier, 1996) A contributor to this project, Gibson (1996), studied the literacy practices on three farms in the Western Cape. She unearths embedded literacy practices on farms and her interview with an unschooled labourer highlights the rich nature of these practices . A part of this labourer’s job function is to build customised farm wagons. This he does with much aplomb and skill, but it is his ability to quantify

⁴Best In Class Improvement Tools

and order materials through a process of adjustments and re-measurements that demonstrates his ability to participate in a range of situated literacy practices. This same labourer produced a complicated drawing of an irrigation system, once more displaying his mastery at applying what he had learnt under varying conditions (Prinsloo, 2000).

A study by Watters in Prinsloo and Brier (1996) highlights the power relations embedded in the literacy practices between white management and black workers at a school in South Africa. Political and cultural overtones are the deep underlying factors which engenders the context in which these literacy practice are set.

Evidence of decontextualizing and measuring literacy in terms of technical aspects, (Street 1984; 1993; 1995) still abounds in South Africa. This was the case when a literacy levels audit was made by a mining company with the participation of the National Union of Mineworkers on this South African mining company.

Cooper (1985) found in her study of this project, that the union expressed “disappointment and frustration” and workers a “deep sense of bitterness” at the results of the audit. These feelings originated from the method in which the collection of data was done, as the method favoured school based literacy and numeracy skills. Workers claimed that they “could perform better than they could talk” (p 11) and therefore felt prejudiced by the method of data collection. Once again the need for literacy practices to be framed within a context, is illustrated here.

The approach to the study of literacy practices has certainly changed from the traditional decontextualized skill it was perceived to have been, to an inclusive social process it has since proved to be. Street’s (1984) ideological model of literacy underpins the notion of the socialization process in the construction of meaning for literacy participants. So too is the contributions of Lave and Wenger (1991) and Barton (1994) who highlight the social relationship literacy practices have with one another and how these practices are enacted through a process of apprentice learning in communities of practices. These theories indeed provide for us guidelines and encouragement when trying to understand literacy practices, especially in the workplace. Context and power relations have proved to be highly contested domains in a post apartheid country, even more so in the workplace today, where “empowerment” has become “first prize” for most of the previously socially disadvantaged race groups.

Globalization and its effects are being felt the world over with nations feeling its effects in one way or another. In order that local companies can compete effectively in this new fast capitalistic global economy they need to know and understand the “rules” that govern this global economy, especially in the area of productivity, the most important driver of globalization. Hull and others, (1996); Hull (1991); Scheeres (1999); Farrell (1999); Kleifgen and Frenz-Belken (1996); Lewis and others (1995) and Gee, Hull and Lankshear (1994) are all researching in the field of the “new work order” and are establishing a framework in order to understand the “literacy rules” accompanying this new way of working. Societies, cultures, language and organizational behaviour are central issues which require an indepth understanding for effective literacy participation in this new work order. The old Fordist setting and approaches to work are being “re worked” so that the workplace settings and processes can conform and deliver at “maximum capability”. Needless to say, with these workplaces and processes being “re worked” so too must workers, management and organizations be “re worked”. This is indeed exciting times to be living in, particularly if you are South African and have experienced apartheid, as our society is six years into the process of being “re worked” into a democracy. Part of the governments plan for empowerment is to raise the literacy levels of the people. The Ministers of Education, both past and present, have placed grandiose plans on the table to “fast track” this process, (Prinsloo, 2000), with limited or no success. The time is at hand to assess the literacy needs of South African workers, in restructured workplaces so that an “African approach” to reorganising work may be understood and developed.

I will now give a brief description of the background of the company and thereafter describe how I gained access to the factory.

Chapter 2

2.1 Background and growth of the company

Strongarms is part of an international automotive product manufacturer which had 17 896 “empowered employees” worldwide as at 01 January 2000, with primary manufacturing locations being; United States of America, Europe, Canada, Brazil and South Africa (Information taken from company website).

In 1935 a local company was appointed as sole agents for these automotive products in South Africa, and 65 years on, it is still the top selling product of its kind.

Initially these products were imported from the USA to cater for the locally produced Ford and General Motors vehicles. In 1962, the newly promulgated initiative of “local content programme” also known as the “Buy South African” campaign, prompted the building of the first factory to build these products locally in Plumstead, Cape Town. Hereafter followed a string of “firsts” as the local producers excelled at producing for the local market.

The company soon established itself a reputation for the highest quality and unbeatable durability in its products, and by 1970, the first export products left the shores of South Africa.

By 1972, the South African plant became the first location to build their products along the lines of new and innovative technology principles, and by 1980, this plant beat their counterparts in the United States and Canada in the race to improve the designs of their products by using gas technology. This technology is still used by all the plants worldwide.

Such was the success of these products, both overseas and locally, that to keep pace with demand, the company invested in new state-of-the-art production facility built at Retreat, Cape Town.

In 1986 their present giant 3,5 billion dollar American parent company, who had 50 plants and 8 technical centres in 16 countries, bought out the previous owners worldwide, effectively taking over the South African operations as well. This take over saw the introduction of the “TQS” (Total Quality Systems) in 1993 which focuses on 3 specific work areas.

These are:

- improving production processes through lean production
- the elimination of waste
- greater employee involvement (Readers Digest March 2000 : p 85)

Some seven years have now elapsed since the introduction of this new working system, and workers have once again been elevated to greater heights of globalization, with the announcement that their company has merged with one of the biggest automotive component manufacturing companies in the world. This transaction has created a premier global supplier of a broad range of integrated systems, modules and components for light vehicles, commercial truck, trailer and speciality original equipment manufacturers (OEMs) and related aftermarkets. The new company will have combined revenues of 7,5 billion US dollars.

(Company Newsletter : No.12, June 2000)

The combined product portfolio and technological expertise of the two companies will support their goal of becoming a global provider of integrated solutions for light and heavy vehicle undercarriage, drive train, exhaust, aperture modules and systems. The combination will also expand their light and heavy vehicle systems product range and strengthen their presence in the worldwide motor vehicle aftermarkets. (Company Newsletter : No.12, June 2000)

To celebrate this merger, the company invited their entire staff of the Cape Town operation to breakfast. (Field notes 14-07-2000) This event was hosted in a big marquee that had been erected in the motorcar parking area for this specific purpose. It was a requirement of management that all workers attend the function as they were paid in full for the day. The workers were neatly seated around round tables which were decorated with protea blooms and indigenous greenery, which contributed significantly to adding a patriotic flavour to the occasion.

Inside the tent, a stage had been erected, this platform was used as the base from which the MD addressed the workers, as well as the area from which their entertainment originated.

The MD addressed the workers and his main points to them were:

- The motto for the new company was : “*we have a part in it*”. This relates to the company manufacturing automotive parts and that each worker has a part in the products and the company, and that by having or playing a “part” brings about involvement and commitment from both employer and employee;
- He urged all workers to become more involved and to actively participate in the team concept of the new company, which may differ slightly from the concept to which they presently subscribed;
- He urged workers to focus more on quality of work which would translate into quality products;
- He said that the target turnover for the company over the next five years is 15 billion US dollars worldwide, and that the South African operation has an important part to play in attaining this target as they are the only plant that manufactures gas products worldwide;
- He also emphasised the fact, and allayed all fears, that there would be no job losses linked to this merger. This announcement was greeted with enthusiastic applause from the audience.

(Field Notes : 14 -07-2000)

At the conclusion of his speech, he answered a few questions from the audience, and hereafter bade them a pleasant eating experience, at which he took in his place at a table amongst the workers.

The food on offer was halaal⁵ “traditional beans and sausage” as a main course, with lots of side dishes and pastries that could be washed down with either tea, coffee or fruit juice. An observation that impressed me was the orderliness and patience with which these workers queued for their food. I believe that this can be attributed to the “company culture” which I have sensed since visiting this company for almost four months on a regular basis. There seemed to exist an air of quietness, tolerance, respect and maturity amongst the four hundred odd workers. This I believe

⁵ This means that the Moslem employees could also partake of it

has developed in the everyday workplace, and was very evident in this confined tent space which they had to share for more than three hours.

The entertainment was provided by a local black marimba band that wooed the crowd with their traditional African music. The mood setting was ideal for workers who could vent their excitement of the merger news by clapping and swaying to the antics of their entertainers. Other local Cape Flats performers also did their renditions and impersonations of international artists much to the delight and laughter of the audience. This light hearted mood continued for about three hours whereafter the workers were allowed to go home.

This social event together with the other regular worker achievement functions i.e. target reaching, best attendance etc, are clear indicators that this company is in the process of restructuring and aligning themselves with the current global economic strategies which highlight worker involvement and recognition. Another indicator can clearly be seen by the manner in which the company viewed their workers, i.e. The workers are termed “empowered” and they actively participate in the “Total Quality System” programme of the company, which is aimed at employee involvement and the sharing of responsibilities on the shopfloor. A call for common identity can also be heard in the motto of the new company (i.e. “We have a part in it”) which makes us understand that all workers have a common identity with the products they produce and the company which they serve. However, together with this goes the literacy practices associated with “empowered workers”, flattened hierarchies and re-engineered worker identities. Questions of which I was mindful throughout my stay at the factory were : To what extent are the workers empowered and how do they (workers) deal with this “empowerment”. Other questions were : How did the worker deal with the “flattened hierarchal” structures and could they perceive the difference in management styles as claimed, between their old way of work and the present system of work. And lastly : In which guise was the “new empowered worker identity” coming to the fore.

Considering the “democratization” of the workplace which has become part of the “new workplace” together with the “openness” created by flattened hierarchal structures, one would believe that gaining access to such workplaces would not be too difficult. This was however not to be. In the following section I will give a brief description of the dynamics present in the

factory. These dynamics highlight the mistrust which exists between employer and trade unions as well as the distrust between workers when called upon to participate in the management process of the team leaders' meeting.

2.2 Gaining access to the research site

My initial enquiry into the possibility of using this automotive part manufacturing company, seemed very positive and encouraging from the offset. I had previously taught a technical subject to some employees at the site and I had used this site as the basis for a pilot study into the literacy practices operating there the previous year. However for the purposes of this study, I was advised by the training department to formally apply to the management, outlining my intentions for the study, so that they could make a recommendation concerning the use of their factory and workers.

I complied with this request and applied, in writing, to the managing director for permission to conduct the study. Four weeks elapsed after I applied without any reaction from the company. This prompted me to telephone them. I was told that my letter of application had not been received, and I had to re-apply via the logistic director of the company. I did this the same day and hand delivered the second letter of application to the receptionist who promised to hand it to the logistic director.

Two more weeks elapsed without reply. Hereafter I used the telephone, and through my persistence with the company secretary, was given the opportunity to speak personally to the logistic director. Our conversation was curt, concise and to the point and conducted in a "don't beat about the bush" vein. After literally begging the director to see me so that I could personally explain the nature and purpose of my need for his factory and workers, he agreed to see me the following week. I telephoned him a day before our scheduled meeting to confirm our appointment and was informed by him that I now had to negotiate with the training manager instead of him when I arrived the following day.

The following day I arrived early for our appointment. This enabled me to peruse the reception area where lots of awards and "world first" achievements are on display. The training manager

arrived and whisked me to his desk, which was located in an open plan office space shared by five other administrative workers. It took me five minutes to convince the training manager that I was not an “industrial spy” and that I would conform to all the conditions that he stipulated. Hereafter he introduced me to the logistics manager, who made it very clear to me that should I be considered a liability or a hindrance to production I would be asked to leave the premises immediately.

By now provisional permission was granted to me and my next hurdle, was to present my case to the trade union shop stewards. Upon our arrival in the trade union offices, which is located within the factory shop floor, the training manager introduced me to the two shop stewards. My host made it very clear to these union representatives that I was not a management “spy”, and that it was the intention of upper management to involve and inform the trade unions about “everything” that happens on the shop floor. This comment was greeted with lots of scepticism by one of the shop stewards when he remarked, “wat wil julle nou weer van ons hê?”. (What do you [management] want from us now?) this retort sparked off a two way argument between the training manager and the shop steward, allegations of being ill-informed and un-informed about certain issues were flung at each other. References were made to the current negotiations between management and the unions that were in progress pertaining to the implementation of equity on the shop floor. I was seen by the shop stewards as a means of commitment by management to “involve them in everything”, although I had no relevance to the equity dilemma that was currently contested between the two parties. A while later the two “warring parties” realised that I was present at which stage the training manager promptly apologized for his behaviour, while the shop steward remained unrepentant about his.

After the tension eased, I set about explaining the purpose for the study to the shop stewards. Without much more ado, they agreed to my presence in the factory on condition that their workers agreed to it. They then invited me to their team leaders’ meeting which they had planned for the following Saturday, where I would be given the opportunity to put my request to the team leaders who in turn would have to consult with their workers the following week about my request.

I have spent some time detailing my experiences around gaining access, because it illustrates some of the peculiarities and complexities of the “new workplace” which has distinct features of the old.

It is evident that the mistrust between workers and employers as a result of the racist labour policies of the previous government was still abounding. To a large extent, the fight for democracy in South Africa was conducted on the shopfloor through the labour movements, and these movements sowed scepticism amongst the ranks of their members towards employers. It is now these same movements who now have the task of reconciling workers and employers in this time of democracy and development under conditions of globalization..

2.3 Team Leaders' Meeting

It is eight o'clock on a Saturday morning and all the team leaders, including the only two women are present, bar two. One of the shop stewards goes into the plant in an effort to locate the two absentees who are reported to have worked the night shift. Already inside the training room where the meeting is to be conducted, team leaders take responsibility in moving the tables and chairs into a position which enables all delegates to sit at the table. Noticeably the two women sit next to one another and one of the two volunteers the minute taking duties. The delegates are invited into the room and encouraged to sit around the table on the chairs provided. All but four decide to sit against the wall, away from the main group, and their seats stand markedly empty around the table.

Stories of Friday evening activities permeate the room. Everybody is curious as to my presence, and I am informally introduced by the second shop steward present. A breakfast menu goes round and delegates are invited to order "the best" as the "baas sal betaal" (management will pick up the tab). A registration list follows closely on the menu, by which time the shop steward who went searching for the missing delegates arrives back in the room. Immediately, remarks are passed from the floor about the commitment and sincerity of the absentees. These remarks die down and the chairperson, who is one of the shop stewards, declares the meeting open. I am now formally introduced, my purpose and aims are explained to them, after which I am given the floor to address these team leaders.

At this point one of the delegates requests an agenda from the chairperson. The chairperson fumbles around in his briefcase and somewhat embarrassingly admits to having lost the agenda. The chairperson assures the delegates that the agenda only has two points, viz. the purpose of my presence, and workplace equity. The delegate who requested the agenda responds to the

chairperson as follows:

Delegate : You need a computer to do all your work, maybe a laptop that will ensure that you do not lose agendas.....and so on....

Shop steward 2 : You see...we must look poor,... we don't want a computer because we are poor.....
(not chairperson) we want to show the bosses that we must do things the hard way.... you see comrade.....

Delegate : You are stupid... having a computer is part of being poor... (laughter from other delegates) It is not "kwaai" (glamorous) to have a pc today..... it is part of the furniture....
(Field Notes : 08-04-2000)

From the above "literacy event" we can deduce that the computer has different values for the two speakers. Although the shop steward has access and uses the computer system on the shopfloor as a tool of production, he identifies it as a resource of management and not for workers.

Finally I was allowed to complete my presentation to the delegates, and after answering some of their questions, I was given the undertaking that these team leaders would return to their cells and seek the approval of their fellow workers.

Having waited fifty six days after submitting my first application to the management of the research site, I was granted permission to take my notepad and tape recorder onto the shop floor and begin gathering data.

Having gained access to the site I immediately set about the task of establishing the different types of literacy practices in the cells. Below I summarize my data on cells and their characteristic literacy practices.

2.4 Cell Literacies

The cells vary in size, some as small as three people. Each cell has its own work and non-work (green area) complete with clothing lockers, tables and chairs, electric kettle and microwave oven. On the walls of the green areas are charts, charts and more charts. All the information concerning the cells' production performances, production targets, preventative maintenance, employee attendance, employee involvement and employee training are all documented and prominently displayed in the green area.

In a three person cell the following number of charts in the green area were noted: Three attendance (one for each member), nine process information (BOS charts - See Annexures 1 A-N), nine employee training charts (See Annexure 2 C), detailing courses each has been on or is due to go on, three preventative maintenance charts and one chart giving general hints on how to do a specific task. A total of twenty-five charts that the cell members are required to follow and update. These are the statutory charts in all the cells, and this number increases as the number of cell members increases. Besides these "process charts", there were five posters relating to health and safety issues, two posters dealing with new products on the production line and two company newsletters.

2.4.1 White Chalkboards

Also located close by, but just beyond the demarcated working area of the cells, are two white chalkboards. These white boards reflect the work in progress. The one board is specifically used to indicate shift production targets and actual production throughput.

A team leader describes its functions:

"...they (the night shift) maybe will take a "first off" or maybe he will write it on the board... "I didn't take my first off... the job has been changed over.... the parts have been washed.....//
And then we just write on the board maybe Farrida you must wash two.... because all the parts are washed already.... you must just see that the parts are correct or..... you must just build up the first offnow that is the way we communicate on the board..."

R: "So the board is an important part of the day...?"

"...Yes, yes when I come in first thing I look at the board..... oh...oh....Trevor didn't do that or that.....or this machine was broken for half of the night..... that must all come on the board..... so if something is wrong.... then we must call maintenance..... right or whatever it is very important that we write down everything..."

(Interview with Farrida - Tuesday 25 April 2000.)

The second white chalkboard is known as the shift board. These boards allow both the night and day shift activity, which is not production related, to be recorded.

Recording both shift activities on one board, allows the teams to compare and communicate production performances, which they have experienced during their shift.

There is an uneasy blend here, I suggest, between self-regulating, self-monitoring and surveillance practices, reflecting the oscillating tensions of the new workplace, between strategies of empowerment and “trust” together with strategies aimed at making workers self-disciplining and monitors of their co-workers performance, and also together with more conventional surveillance strategies. The awarding of stars for non-absenteeism, in particular rankles for many of the workers:

“... if you are sick or late in the morning you lose your star...you can’t come late...after half past seven your get 3 minutes grace *mos* like... that... but if you come here at twenty five to eight then you lose a star..yes for the month...you don’t get a star for that month...”

*maar hulle kom met die sterretjies soos kinders wat op skool is wat sub A is....
(but they come with their little stars as if we are children at school in Class One)*

(Interview with Peter - Tuesday 25 April 2000.)

That the work monitoring processes are taken seriously is quite clear. This is how a team-leader describes it:

“..... everything must be right on your section..... the machine must be capable.... 100% capable.... I mean.... there mustn’t be no problems... that must all be checked out before we become world class.... the machine must be 100%.... I mean everything that concerns on your section must be just right. There must be no breakdowns....”

It must be like... we must reach.... we umh reach a certain amount.... on our BOS charts.... these are our BOS charts (pointing to a series of charts on the wall of the green area) ...say we have to reach our changeover time. Our time have to be say 2%..... then we cannot go beyond that 2% or lower down maybe... but we can’t go over that say like ... they want ... we take 20 min to change-over...

then they want 10 min we must change over in 10 minutes..... then we must prove ourselves... we must work on it we must see where we can cut down on maybe..... like that we must try and bring that down to that 10 min so.... something like that you know....”

(Interview with Farrida Tuesday 20 April 2000)

These two white chalkboards are the main sources of current information regarding the strategic functioning of the cell between the day and night shift teams and their managers. Each chalkboard has a clear function in the support of the teams and the production process. The one board contains all the information pertaining to the production processes, which includes inter alia, downtime, production runs, product changeovers etc, while the other board carries the information relating

to the “human involvement” which the teams members have with the production process. Information on this board would be inter alia, concerns and benefits of workers and employer and absentees etc.

So clearly one can see that these boards have an important part to play in organising and informing the work processes and work status of the work cell.

2.4.2 Shift Meetings

Before the commencement of the shift (at the sound of the first siren), all the team members assemble in front of the shift board and the team leader will facilitate the “start up meeting”. This meeting has a set agenda which is permanently printed on the white chalkboard to which specific time limits are accorded for interaction on the given topic. The agenda is:

- | | | |
|----|-------------------------|--|
| 1. | Review Meeting | (1min.) - roll call is taken |
| 2. | Review Previous steps | (2min.) - check whether the previous benefits and concerns that were raised, have been met or addressed) |
| 3. | Safety and housekeeping | (1min.) - discuss issues relating to safety and housekeeping |
| 4. | Review KPI | (2min.) - compare the performances of the shifts |
| 5. | Review B's and C's | (1min.) - review the benefits and concerns of both the employee and employer |
| 6. | Next step | (3min.) - suggestions to the benefits and concerns raised. |

The meetings in practice stay within the allotted time but seldom follow this formula so neatly. While it is the team leaders' concern, often, to keep the meetings as routine and formulaic as possible, they are often diverted by disgruntled team members raising their own not-so-easily contained concerns.

2.4.3 Focus Group Meetings

Focus group meetings take place at every cell at various times every morning. A focus group comprises of all the key support personnel that a cell has access to, and normally consists of a maintenance foreman, a quality engineer, a production engineer, a safety representative and a member of that cell at which the focus group meetings is being conducted. These focus group meetings takes place at the two white boards, for it is here that the production and other problems which the cell may be experiencing can be identified and addressed. Once again, the team leader does not have to represent the cell at these meetings. The operators experiencing the problem/s would normally represent the cell at this focus group meeting, and would then have the opportunity to explain to management precisely what his or her sentiments are about a particular problem. This method brings about a sense of personal engagement with both management and the process of problem solving for the team member. In most of the instances which I observed, the team leader took a “back position” compared to his team member during these discussions, in doing this he allowed his team member full participation, (projecting the notion of being the “expert” on the machine). This stance also enabled the team leader to be informed first hand of the solutions that were discussed. In most of the discussions, the management team would, after hearing of the problem, ask the team member for a possible solution and the active engagement in solving the problem, would firstly revolve around the possibilities and suggestions offered by the worker.

2.4.4 Employee Involvement Meetings

Employee involvement meetings are geared specifically to getting workers to put forward suggestions for improving production. Workers are paid twenty rand per suggestion when it is implemented. Generally production- related problems and world class certification strategies are discussed in these meetings. The frequency of suggestions is recorded and standards set as part of “World Class” certification strategies.(See Annexure 3 G) At one such meeting, the team was harangued at length for being down on their suggestions quota. The following is the manager talking (he is called a “facilitator”) who functions as the teams’ “coach” in these meetings. Notice that it is the score or quantity of suggestions that is the issue for him, not what they are about: (i.e. production improvement)

M:secondly, if I look (at) the suggestions, let's worry about your job. It is a lot of work and a lot of motivation and we really need proper suggestions up.//

We need a bigger...., but I don't want to leave it till you get certified or recertified as world class, but there is a big problem to get you on last minute. You've got to keep yourself on track. You cannot let it just slip, because you know if you let it slip, what happens? You looking at a hundred suggestions ayear ..you've got.//

Rather let's pull it back now before it goes too far. I'm telling you this every year and you do the same thing every year. If you go on night shift I think you tend to forget, but you come to this meeting and with nothing, each and every person has got to do their bit. I need those charts filled in that green area and useful suggestions in it, because those at..... must wake up. Because everybody can't keep supporting those that are not making an effort. Everybody has got to make an effort. Not leave it to half, or two people or whatever it is. It is not a lot that we are asked to do, it is just over one suggestion a month. // That should not be difficult for anybody and they are not looking for new machine suggestions, we're looking at small things. It does not have to be big.....

(Employee Involvement Meeting Thursday 3 May 2000)

After he finished his considerably lengthier monologue in English, the facilitator left the meeting. Immediately a worker said to the team leader.

Jy praat net saam. Jy praat dan nie terug nie. Jy moet terug praat met die man. (*You just agree with him. You don't talk back. You must argue with the man.*)

(Employee Involvement Meeting Thursday 3 May 2000)

It is clear that team leaders' activities include many of those usually associated with middle management, and the work can be quite invidious because of their dual identities. It is therefore interesting to see how reading and writing are seen to be central to these dynamics.

There are many more meetings which take place within the factory, viz. Trade Union, Health and Safety to name a few, but the three main meetings are described above.

2.4.5 Computer Literacy

Another icon of "worker empowerment" available at the Strongarms factory are the computer terminals found in every cell. These terminals are all linked to a central server from which all the relevant technical data and drawings for all their products can be accessed. All employees are encouraged to utilise the computer and search for their own answers to queries instead of asking a fellow cell member. Often during my observation I noticed how one or other member was given a slip of paper with the computer commands written on them and told to look up their own information. The computer search facilities are very powerful, and the information available on the system, ranges from the completed view of a product down to the first screw in the production

process. Notably, the employer does **not** provide computer training for their production workers in the effective usage of the system. The usage and operation of the computer is “brokered” (Prinsloo and Breier, 1996) from one employee to the other. Normally older workers show or demonstrate the system to the new members of the cell. Evidence is beginning to show that these newer cell members, once shown the basic operations of the computer system, are beginning to explore the system in greater depth and then “broker” the newly acquired knowledge back to their colleagues who showed them the system in the first instance. This has brought about a measure of dissatisfaction amongst some of the workers on the shopfloor, as these new members are trying to develop a deeper knowledge of the system. Some arguments are that these new members are trying to expose the limited abilities of the older workers, the more honest opinions recognise the fact that the new and younger workforce is more adept at working with computers.

Summary

Clearly from the above we can see that I have engaged with a “planetwise” company (they prefer to be recognised as planetwise and not merely international or worldwide) that has changed its production principles towards the “new work order” and has established the mechanisms in their local plant for this system to flourish. The company and workers have developed a “workplace culture” which they claim is the key to success.

The “new work order” culture constitutes a specific community of practice (Wenger, 2000) which has literally become a requirement of the modern day work order. Embedded within these communities of practice are different “sub-practices” which are central to the cohesive functioning and sustaining of the wider community of practice. Central to the functioning of the community of practice are the various literacy practices that workers actively engage in, creating a distinctive character and identity for such a community of practice.

In summary, this thesis aims to highlight socio - cultural literacy, discourses and the new work order processes as they interact at a newly restructured workplace. From this I hope to show how cultural and work contexts, literacy and learning influence the workings of value and power of both the workers and their employers.

Chapter 3

Situated Literacy Practices - Farrida's Story

Manuel Castells (in Lankshear, 1997) identified five key features of what may be called new capitalism (p311). One of these features is that major organizational changes in production have occurred along two axes. He claims that firstly, goods production had shifted from "standard mass production to flexible specialization and increased innovation and adaptability." (p 312) This allows producers to customize and diversify their products through quick changes between different production lines. His second observation is that a change occurred in the social relationships of work. The "vertically integrated large-scale organization of "old", standardised mass production capitalism has given way to "vertical disintegration and horizontal networks between economic units." (p 312) This has brought about a matter of flatter hierarchies and increased devolution of responsibility to individual employees, producing multi-skilled work teams with interchangeable tasks, and enlarged scope for workers to participate in decision - making.

In this chapter I will focus on a team leader who I will call Farrida, and on one extended work crisis. This will enable me to explore Castells bi-axial claim that work and workers have changed to be more innovative and adaptive than in the past. Farrida is the team leader of the Mono Gas Cell, and I will show how she engages with some of the literacy practices associated with a work place which is in the process of flattening its hierarchal structures. This chapter will demonstrate that Farridas' literacy skills are "situated and contextualized" within the context of her work and social background and that she possesses more than just the ability to reason, solve problems, apply knowledge, write and communicate effectively in order for her to perform her tasks. Hers is a job which places a heavy emphasis on quality.

Farrida is a Coloured woman in her mid thirties, who is married with two school- going children and lives in Mitchells Plain, which is about thirty five kilometres from the factory where she works. Her husband works as a truck driver, a job which takes him into the country side everyday of his working life. Farrida was educated up to grade ten (out of twelve school grades) and holds the distinction of being the first female Coloured to be promoted to team leader. Her appointment

to this position stems from the fact that the previous team leader of the cell resigned as team leader, due to the increased demands which were placed on all the workers when the factory started with the process of restructuring five years ago.

Farrida appears to love her work, especially when asked to stand in as “foreman” when the need arises. Her only drawback is that with the looming increase in product demand, she may be required to work at night as well to relieve the current night shift team leader. She has categorically stated that she would not be prepared to work at night, as this would cut her off completely from her family. She has indicated that she would resign her work should she be forced to work the night shift.

During the research period, as a newly appointed team leader, she was under pressure to keep all the scores on the production charts (BOS) positive, and in particular to keep the “downtime” (when machines are unproductive due to breakdowns) as low as possible. However she was faced with a dilemma when one of the machines produced products that were out of specification, and she did not have her engineers’ support to stop the machine and sort out the problem.

Farrida’s product specification problems had started a month earlier. When she realised that the machine was problematic, she immediately contacted her supervisor. He initially tried to assist her with the re-aligning of the machine, and when this did not solve the problem, he referred her to the section engineer. Farrida then noted the “out of spec” and “in spec” measurements on a sheet of paper and presented this data to her engineer. The section engineer looked at these measurements, made a quick mental calculation and told Farrida that the products were “in order” and “signed off” the job. The action by the engineer effectively instructed Farrida to continue production, even though the products were not within the standard production specifications.

Reluctantly Farrida and her team continued for the next few days, before she once again approached the engineer about her concerns that the products were “not in spec”. Once again she was told that the products were “within tolerances” and they were again okayed and signed off. This action by the engineer created a personal dilemma for Farrida who saw the building of quality products to specification as her responsibility, and this conflicted with the assertion of

authority by her engineer. She was stressed by the event :

F
11 because they (engineers) couldn't find the problem...and I didn't want..... to
12 continue....because I'm not going to.....You see.....//.....
13 what happened.....//..... about a month ago this happened with me...that
14 the very first time. I took a first off⁶then....then..it is not in spec.....so I go
15 to the engineer...like he is the top of the engineersand every time he
16 just "signs it off"⁷the papers//..... say I must continuenow
17 those jobs.....//.....they are all export jobs ... now the big problem is
18 I just got fedup and went to the foreman and told him 'listen here I am not going to
continue with this
19 job every time Mr W (engineer) "signs off"the job and I'm not happy with.....

(Interview with Farrida - 9 June 2000)

However, the "out of spec" products worried her enormously, and she decided to adopt another approach with her engineer. She decided to present her concerns in a more constructed manner, and drew up a mini-comparative study of the actual measurements of the products and the standard specification. She printed a copy of the standard specifications from the computer system and then took a shock absorber and physically measured its critical dimensions with a vernier caliper. Next she wrote down these measurements against the standard specifications and colour coded those measurements which were out of specification with a red highlighter pen. She then presented these "findings" to her engineer, who once again, looked at the results and concluded that it was in order and gave her a "sign off" instruction.

It was clear that Farrida was concerned with the instructions of her engineer. (Line 19) Her commitment to produce quality products, conflicted with the engineer's instructions to continue, as she was used to building shocks "first time right". Farrida's experience at building these specific shocks according to specification over the past years, created an awareness of the company's

6 The first product of the batch. Normally five products are manufactured and all the specifications are measured and compared with the standard specifications on the computer system. Once it is ascertained that all five products specifications fall within the set tolerances, will the cell proceed to produce the order. This is an indication that the machines are set to the correct specifications of that particular product.

7 When the engineer signs the product off he overrides the set specifications and in so doing authorises that production can continue.

expectations from her. This awareness was based on values such as “building quality products”, “the elimination of waste” and attitudes about “employee involvement” and “worker empowerment”. These values were being challenged by her engineer’s authorisation by “signing off” her defective products. She continued to produce these products in this fashion for the next few weeks until the issue came “to a head” three days before I paid her a scheduled visit.

I had made arrangements with Farrida the previous week to observe the workers for that morning. Upon my arrival, I found her sitting in the green area⁸ of the cell. On the table in front of her was a multiple- page computer printout. Looking at these pages, it became instantly noticeable that blue and red pen markings were all over most of them. All the machines in her working area were switched off and the other cell members were nowhere in sight. I enquired from her about the situation to which she curtly responded : “*groot probleme*” (big problems) and gesticulated to the shift activity board⁹. Written on the board in the concerns column were the following :

valve seating is out of spec[ification]..[I] tried everything [and] could not fix [it]... 01h15

After reading this notice I turned to F, asking her the meaning to this. This is how she responded:

“.....when I come in first thing I look at the board...oh..oh..T (night shift team leader) didn’t do this or that.....but look here this machine (pointing to time) was broken for half the night. You see something is wrong..... we call maintenance.
But I don’t think they can fix it also.”

I then asked her :

“ Is that the way you picked up the problem this morning as well ?”

To which she answered :

“ yes, and then I know exactly what is wrong with the machine.”

My following question was :

⁸ Rest area for the workers of that cell. All cells have a green area where one would find clothing lockers, tables chairs, electric kettle, microwave oven etc.

⁹ The shift activity board or white chalk board is the tool used by the team leaders to communicate to each other information concerning machine capabilities and production targets on their shift. The board is the primary means of communication between the two shifts.

“...with this machine now broken...does this not affect your production targets ?”

To which Farrida replied :

“yes it does ...but I’ve have been standing still now for three days...let me think...yes this is my third day now.....”

Surprisingly I replied :

“Your third day....”

(Interview with Farrida - 9 June 2000)

The shifts at the factory are structured in such a way that the machines have to be switched off, cleaned and made ready for the next shift. As a result the teams do not get to see or speak to one another between shifts, and the only way that communication exists between the team leaders about production runs and problems is by way of the shift activity board. This is the reason why Farrida and other team leaders first read the activity board, and thus become acquainted with the status of the cell. The writings on most activity boards in the factory have a heavy undertone of engineering data, however the cells manufacture different products and therefore specific terms and concepts are unique to every cell. For Farrida and her team producing shock absorbers, using gas technology was their speciality and therefore they had to engage in a discourse which made special references to this technological concept. Therefore when Farrida read on the activity board .. “ valve seating is out of spec[ification].....” she immediately knew the magnitude and severity of the problem.

The words and terms relating to valves and valve seating specifications, are specific to this cell, thus making the cell members and Farrida in particular, “experts” in their field of work. This specialised knowledge or “working intelligence” (Lankshear, 1997) made Farrida a valuable resource person. This is how she responded to the message which was written on the board :

“I just got fedup and went to the foreman and told him ‘listen here I am not going to continue with this job every time Mr W (engineer) “signs off” the job and I’m not happy with it.... I mean we must come to a conclusion we must come to a point where the problem is....I don’t feel happy just signing off. I know that something is not right...that something happened here [with the machine] ...so I just “threw in my papers”and that was last Wednesday already.”

When the machine once again went out of spec and the night shift team could not fix it, Farrida had by now endured enough stress and frustration so she went to her supervisor and “threw in her papers”. She then decided to consult the senior engineer, as she could no longer continue to work under these conditions. To substantiate her case, she once again printed a copy of the specifications from the computer, measured products which had been made from the previous shift and tabulated these readings alongside those of the printout. Again she highlighted the problematic measurements and presented this mini comparative study to the senior engineer. This course of action paid dividends, as he recognised that a problem had occurred with that machine. He then called a meeting with the other management role players of her section, and they together with Farrida, were each given a section of the machine to analyse in order to locate the problem. Farrida was allocated the piston section of the machine.

In order for her to carry out her task, she now had to download from the computer system all the relevant data specifications relating to the piston section of the machine. On the whiteboard she drew a block diagram (fig. 1) which represented the piston and then wrote the relevant data and measurements for each part. On the parts and procedures with which she was uncertain, she engaged the help of her foreman, and together they constructed and labelled the piston section of the machine on the whiteboard.

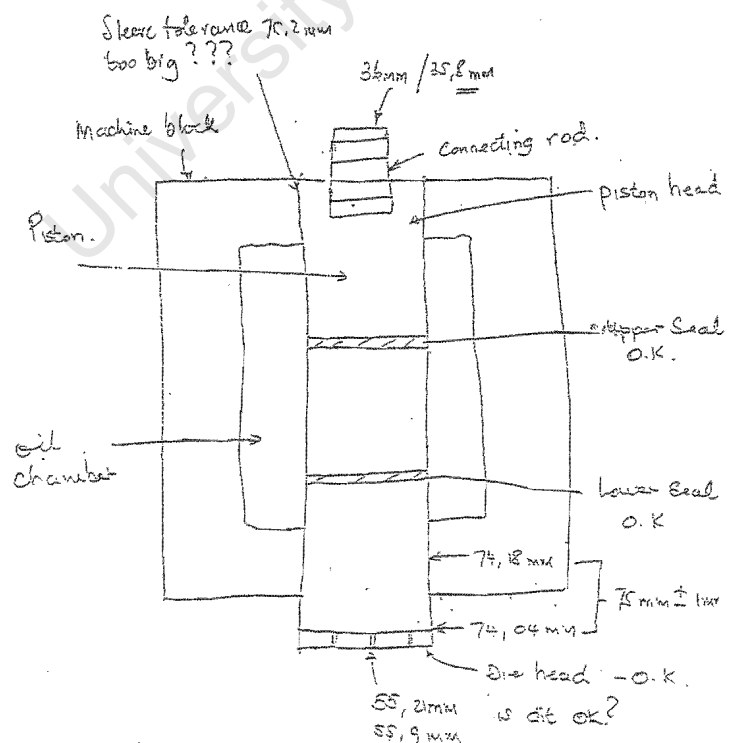


Figure 1 - Farrida's Piston

The next operation was to take all the measurements of the various parts of the piston with a vernier caliper. These measurements were then compared with standard specifications on the computer printout, and thereafter recorded on the whiteboard. Measurements within specifications were written in green pen and those measurements outside of specification were recorded in red. The recordings of these measurements took two days to complete, and once completed, Farrida called the senior engineer to the whiteboard where they discussed and validated all the measurements. Eventually they agreed that the measurements that were recorded in red i.e. out of specification, were not too critical and that those parts of the machine that they were studying could not have been the cause of the problems they were experiencing. She waited anxiously for the results of her colleagues regarding the analysis of the parts they were given. Eventually the problem was discovered by the head of the inspection division. He inspected all the welds on the product under microscope, and discovered that the valve seating edges were not sufficiently "rumbled". This created burrs on the ends of the valve washers which in turn allowed hydraulic oil to pass through the valve seating into the gas chamber. When this occurred, the oil pressure in the cylinder dropped below the specification and the product thus showed up as defective. This problem was promptly fixed by the maintenance department and normal production resumed, three and a half days after Farrida "threw in her papers".

From the above one can clearly see that Farrida was actively engaged on the higher end of Hulls' taxonomy of literate functions. (See Annexure 6) She displayed ability and confidence when engaged in "temporary communities of practice" (Lave and Wenger, 1991) i.e. discussion in meetings with engineers. She tested her products, having the "working intelligence" (Lankshear, 1997) about knowing how to use the vernier caliper and computer system. She displayed the ability to validate her measurements against the standard specification and could reference it as being within or out of specification. When Farrida needed assistance she sought this from her foreman. He helped her to label the different parts of the piston. She also had the ability to deconstruct the piston and represent it in a simple and understandable form of a block diagram. This is an indication of her understanding of the machine and the important parts of the piston which could possibly have been the cause of her problems. Through her presentation of the mini comparative study to the senior engineer, she left him little alternatives but to investigate her claims that the machine was faulty. This resulted in a complete analysis of the machine. Further she also displayed

the ability to interact at the engineers' level when they discussed the discrepancies of the measurements of the piston and gained consensus that the measurements were not the cause of the problem. Finally through her conviction that a major problem existed with the machine, she exercised her authority as an "expert" in her field and sought the opinion of her senior engineer.

Conclusion

I have observed that the work of overseeing mechanised assembly lines is largely literacy free, besides the routines of checking products against specifications. However, this chapter has demonstrated and confirms Hulls' (1991 and 1996) study that having "basic" literacy in the form of simple coding and de-coding skills is definitely not enough. Farrida clearly demonstrated that she needed to express herself adequately and effectively to her superiors when she highlighted these problems to them. She did this by articulating the problem by means of a mini comparative study. This she did in two formats. In the first instance she wrote down on a sheet of paper the correct and incorrect measurements, and when her engineer rejected these measurements, she engaged the computer system and down loaded a printout of the "official" specifications. This she used as the "institutional support" (Lankshear, 1997), or the measurements which the company prescribed, and then referenced her measurements against it. She encountered the same result with her engineer, as when she wrote down the measurements.

Although Farrida was temporally disempowered by her engineer's decisions, she nonetheless sought alternate strategies to reinforce her position as the "expert" in her field.

We need to be mindful that Farrida had only completed her grade ten at school, and apart from a few company courses which she had attended, had received no formal training in compiling comparative studies for analysis. It is unquestionable that Farridas' literate skill "surpassed the "basics", whether it was "cast in the traditional mold of readin', writin' and 'rithmetic or recast as "higher order thinking skills" or other decontextualized competencies listed on various skills lists", which workers are commonly required to possess in order to carry out a work related activity Hull et al (1996). She displayed the ability to "dip appropriately and as needed into a wide and deep repertoire of situated ways of using written language and other forms of representations" in order

to solve her machine problems which brought so much stress to her. Through her conviction and belief of what was correct and incorrect in terms of the product measurements, she decided to bypass her engineer and sought the help of her senior engineer. This move allowed her to engage in an even higher level of literacy. She now had to engage in the processes of troubleshooting and analysis, a domain which is normally reserved for those who had acquired formal training in it. (E.g. technicians and engineers)

When Farrida was tasked by the senior engineer to analyse the piston section of the machine, she once more displayed her ability to interact across modalities of literacies. She redrew the complex piston section of the machine on the white board and represented it in the form of a block diagram. This is further evidence that she displayed the ability to reconceptualize objects into an abstract form. This re-echoes the claim from Farrel (1999) that workers are in the process of “reconstructing” themselves to align themselves with conditions in which their work tasks are set. These “new work conditions” are largely brought about by the fact that work practice has become a matter of learning to manipulate words, icons and other signs. (Castells 1996; Lash and Urry 1994 in Gee et al, 1996) This situation brings about this process of “worker reconstruction”, it is a situation where workers struggle with these new ways of “being” (Scheeres, 1999) and creates stressful conditions for these workers to perform their tasks.

From the above it is very clear that Farrida displayed the ability to engage effectively in the literacy practices associated with a restructured workplace. Although her literacy practices were at first limited by her engineer, the evidence has shown that once she had been given the opportunity to exercise her knowledge and expertise as an “expert” in her cell, another dimension of Farridas’ literate identity was revealed. She possessed situated and contextualized literacy skills, this enabled her to explain, participate in information flow, problem solve as well as acknowledge and resist authority in the course of engaging in her work activities.

Chapter 4

Process, Participation and Literacy Empowerment

Meetings (as discussed in chapter 2.4.3) have no doubt become an important feature of the new work culture and new working identities of employees. Glynda Hull and her colleagues demonstrated and highlighted how these new identities operate amongst the new work force involved in the factories of Silicon Valley (1996). They suggested that the increased literacy requirements in this new work culture may be seen as potentially “humanizing or even liberating”(Hull et al 1996 : p 161) for the workers engaged in these new work environments. Whatever the pros and cons of the new way of work may be, people who are engaged in these new work processes are also undergoing a process of personal change, some even experiencing “identity problems” as a result of these personal changes. (Scheeres, 1999)

A marked change in this new way of working, is that workers get to speak about their work in formal meeting sessions. These sessions were called EI meetings at Strongarms (see chapter 2.4.4), and the main purpose of these meetings is to get ordinary workers to put forward suggestions for improving production and to discuss and find solutions to problems which they may encounter during the course of their work. The suggestions offered by workers have to be practicable and cost - saving, and should a suggestion be implemented, a twenty rand bonus is payable to that worker.

In this chapter I will focus on one EI meeting in the AM¹⁰ strut cell. I will present a large portion of the transcript of this meeting with the intention of giving an account of the narratives and literacy demands and practices prevalent during these literacy rich moments. As I progress through this chapter, I will endeavour to focus on :

- a) How the environment of new work place practices keep abreast with the literacy practices demands placed on it.
- b) The patterns of talking, and the “type of language” being used as well as what type of acting and values are apparent.

¹⁰AM - After Market

- c) How would one describe the literacy demands of meetings that workers needed to attend and workers' responses to these demands.
- d) How are these demands embedded in the company's policy of implementing teams.
- e) How do workers meet these demands, circumvent or shape them.
- f) What these meetings suggest about the identities workers as they are constructing as team members.

(Hull 1996 :121)

Background

In order to give a clearer understanding of the dynamics of these meetings, I think it best to put up front some of the "rules" governing these meetings as well as the language practices which are employed by these teams to "get their work done".

At this meeting the full complement of fourteen team members were present. During the course of my study here, I have also become aware that there was an unwritten but accepted rule in these meetings, that the team leaders also assumed the responsibilities of chairperson. Johannes is the team leader, he is in his late thirties and well liked by his fellow workers. He wandered into the EI room chatting to Brian. The EI room is situated adjacent to the canteen and used only for this purpose. A roster hangs on the door indicating the time frames when the various cells have usage of this room. Also present was Manson, the eldest and most experienced worker in the team. He only has two years to retirement and has been with the company for over thirty years. Manson has seen many changes to the company structures and system over the years, his only focus now is his retirement, and he speaks enthusiastically about the time that he will spend with his family after his retirement. There was idle chatter amongst all in the room, this continued for about ten minutes after which Johannes cleared his throat, and called everybody to attention.

Looking around in search of an agenda proved fruitless, and the only "paper" in the room, was the

EI (Employee Involvement) minute book. In this book all the EI meeting activity was recorded, this included inter alia, suggestions, solutions and recommendation for improving the production process. (See Annexures 4 E-H) Ivan had this book with him, and was expected to do all the writing for the meeting. This duty was “forced” on him by his fellow workers after they discovered that he held a good command of written English.

The meeting started off with Johannes picking up on a remark made by Peter concerning the machines and a lively discussion ensued. The discussion was conducted in a hybrid mix of Afrikaans and English. Speakers constantly switched between Afrikaans and English as they made their point during the discussion. The following excerpt from the transcript of this meeting will demonstrate this code switching between English and Afrikaans, and how workers “assemble” work language and home language to constitute a hybridized “social language” (Gee, 1999).

It is important to note that the switch to English vocabulary is usually literacy-linked. The workers’ use of English terms is often linked to their frequency in written form, in management discourses, documents and conversations. The English words and phrases are frequently-used terms in the secondary discourse of the workplace, and they have been appropriated into a “borderline” worker discourse. (O’Connor, 1994) This workplace language in turn draws on the home language practices of the workers, where Afrikaans is commonly mixed with English terms in ways characteristic of how people talk on the Cape Flats.

- JV Die invul van die bord ne.....dit is nie eintlik ‘n ernstige storie niemaar.....ek gaan ‘n voorbeeld gebruik.vannoggend.....Julle het gesien die T boor het gestaan.....nejulle het geweet daar is nie *inners* nie.....is dit so.....? nou ons kan nie sê *no inners or waiting on inners* nie.....en die boor staan.....die *welders* het nie *blame* daarby *inners* is nie.....ons moet melding maak *maintenance or problem with inners*.....ne.....ons skryf neer waar die *problem* is.....nie die ou wat ons *next week supply* nie..... ek weet nie...klink dit logies of watter ? Want baie keer dan kom die *welders* om daarso dan sien ek ook hoe *change* hulle gesigte ,.. Daarso maar ons skryf neer wat soos nou die dagmaar julle het nie gewag vir my nie... As ons sien die ouens staan dan vind ons uit altyd.....*wat kind dan nou??? waar is die probleem...???.* Ons skryf neer wat die probleem is ..en waar die probleem is...Daai kan ook ‘n klomp *controversy* veroorsaak of uit die weg uit ruim.....en elkeuur wat daai bord ingevul word..ek weet nie of ek ‘n klokke moet sit wat elke uur gaan lui...?by die krimpmasjien wat die ou kan *remind* van die bord of wat ? Want M is

nie lief om te skryf nie..ook nie jy nie (J).. Julle vergeet somtyds ..maar ons probeer om in te skryf daarso.as die uur om is.. Sit die *tally* daarso. Op die einde van die dag dan maak dit die taak makliker. Daarom is daai *suggestion* daar op van die KPI.. Ek sien daar by die OE shocks dit sit somer daar by die *production board* daarso.Waar jy die ure neer skryf daarso So as jy gewag het op *parts of whatever*, dan sit jy dit aan die einde van die dag dat jy gewag het, dit maak dit maklik vir jou dan weet jy presies waar die probleem regtig lê, waarop ons gewag het ens. Is daar nog enige iets wat ons kan byvoeg voor ons die uur afsluit ? Enige iets wat julle op julle harte het?

339 *The filling in of the [shift] board.... it is not really a serious story....but..I am going to use this*
 340 *mornings example.. You all saw the T drill was standing...right...?. You did not know that there*
 341 *no more inner [tubes] ..Is that so..? Now we cannot say that the reason for standing is no inners*
 342 *or waiting for inners... and the drilling machine is standing.. The welders cannot be blamed for*
 343 *a lack of inners... we must write on the board that maintenance or problem with inners.we need*
 344 *to write down exactly what the problem is.. like the person who supply is [is the problem]....don't*
 345 *know, but does this sound logical. ?Because many times the welders come and read the board,*
then
 346 *you must see how the expression changes on their faces, and they were not made to wait.....When*
 347 *we see the guys standing we have to enquire as to the problem. Ask them specifically what is the*
 348 *matter, and we write down what the problem is. By doing it the way we are doing it now can ause*
 349 *a lot of controversy and this must be avoided.*
 350 *And every hour that the board needs to be updated, I don't know if I must install a bell there that*
 351 *will remind you everytime It is the guy at the crimping machine that needs to be reminded of the*
 352 *board. You know that M does not like writing neither do you (pointing at J). You*
 353 *forget sometimes..but we must try and remember that we need to fill in the board after everyhour.*
 354 *Write the tallies in there. At the end of the day it makes our tasks so much easier.That is why that*
 355 *suggestion is on the KPI board. I have noticed there at the OES that the their board is standing*
right next to their
 356 *production board. The hours are written down immediately, so if you need to wait on parts or*
 357 *whatever you will know immediately by the end of the day that you have waited. This makes it*
 358 *easy because now you will be able to see exactly where your problem areas are and where you*
 359 *have waited. Is there anything else before I finish off? Anything that you may have on your hearts*
maybe.?

P Wat sê hulle van die.....

360 *What do they say about.....*

(Employee Involvement Meeting - 3 May 2000)

(Please note that the actual transcript of the conversation is the unnumbered talk with the English words typed in *italics*. The numbered transcript is the translated version of what was said with the English words used in the actual conversation typed in ordinary non-italicised script.)

From the above excerpt it can be deduced that the environment created by the new work place practices had a direct influence on the literacy practices of the meeting. The team members were being addressed by their team leader concerning the important issue of record keeping. He made use of the generally accepted social language of the factory. By talking the language of the cell, rather than the formal or more English language of management, he confirms his membership of the cell as a “community of practice” while constructing it as such through his leadership style. However, something else is also at work during these EI meetings. Although the conversations are conducted in this “hybridized” language, the language for management literacy documents were mainly done in English. All the reports, minutes etc (See Annexure 4) are recorded in English. The team leaders submit all their documents in English to management, but they conduct their “business” in this hybridized language. This method of communicative practice, which had been adopted throughout the factory, benefited both employer and employee as the important task of “work” was being done in this manner.

Another aspect being demonstrated in this excerpt is the multi modal engagement of Luke and Freebody's (1993) typology of literacy competencies. Two competencies i.e. pragmatic competence (knowing what are the culturally appropriate uses of reading and writing within the range of social and work context) and critical competence i.e. (knowing your role as a text analyst, including a concern with how texts construct and represent the world, and how they position and construct human objects) are clearly demonstrated. With Johannes engaging in this “hybridized” language in making his point to the cell, he demonstrated his pragmatic competence, and secondly he displayed his critical competence with his concern about how the written text on the KPI board gave a misrepresentation of the actual situation in the cell. This reflected negatively on the welders, which was a concern of his. His concern with the textual representations of his cell on a “public document” is thus a very good example of the extent to which textual practices have become central to work practices in the “new workplace”, and also illustrates the contextual conditions of such textual practices.

As the meeting progressed the discussion moved on to the suggestions for improved production. Workers at this factory are required to make fifteen compulsory suggestions per annum, this requirement is also coupled to their annual bonus which could be effected negatively should they not comply. Because of this requirement by management, making meaningful suggestions could become a stressful exercise, which sometimes affected the workers. Farrida (See Chapter 3) also experienced a large amount of stress while she tried to convince her engineer of the problems the cell was experiencing with their faulty machines.

“Suggestive Discussions ?”

I will now turn to the manner in which this cell handled their discussion concerning their suggestions, and the manner in which they dealt with problem solving.

I numbered the suggestions raised at this meeting 1 to 12 for easy identification.

- JV So gou as moontlik boeta Mansonek sal hulle verwittig daarvan[.....] ook ons kan nou *suggestions* vat as daar enige is.....(pages through the book in front of him) Hier is 'n hier is 'n groot verandering hierso...hier is 'n klomp *suggetions* wat nou hierso uitgekom het (shows team book) (1)...*Identification for penetration check - Make a sticker to identify* Kyk wat Kops my nou gevra het...hy sê ons moet spesifiek sê hoe groot die *sticker* moet wees dat hy kan weet (paging on through book) Ek het dat... vir my gesê dat *suggestions* vir my gestuur is toe sê ek vir hom ...OK net voor lunch...ek gaan my bes probeer ...net voor lunch gaan ek almal die *suggestions* uitskrywe en vir hom gee daarso dat dit kan bygevoeg word by die maand s'n. En die wat alreeds klaar is sal ek ook vir hom daarso gaan melding maak op die witpapier hierso (pointing to top copy of the suggestion sheet) Hier is nog ene (2)...*wires too short on robot one when welding 35884(part no)....[.....] make a arm to keep wires up*
- 87 *As soon as possible brother Manson.....I will inform them of it.....[....].... we will now entertain*
- 88 *suggestions if there are any.....(pages through the book in front of him) Here is a big difference*
- 89 *here is a lot of suggestions that came out of this.(shows the team the book)(1)Identification for*
- 90 *penetration check - make a sticker to identify ..Look what Kop[son] asked me*
- 91 *He said we must be more specific about the size of the sticker so that he could know Now he is*
- 92 *going to make a big one....[sticker]...or the holder is not...or where the holder must be..So when*
- 93 *we write out suggestions then we must be more specific(paging through the book)Kopson asked*

94 *me to send the suggestions to him...OK just before lunch.I will try my utmost to write out all the*
 95 *suggestions and let him have so that he can add it to this months total. And those [suggestions]*
 that
 96 *is completed [written out] I will also remind him of them that is written on this white paper*
 97 *(referring to the carbon copy in the suggestion book) Here is another one[suggestion] (2)*
 98 *..wires too short on robot when welding 35884 (part number)...[...].make a arm to keep the*
 99 *wires up....*

(Employee Involvement Meeting - 3 May 2000)

Johannes was very aware of his audience when he addressed them. In response to a reminder from Manson, he referred to him as “boeta” (line 87), which is usually used in the context of addressing an elder brother. This is a sign of respect towards Manson for being the eldest and most experienced member of the team. It is also an example of the discourse of “belonging to a family or team”. Watters (1996), highlighted this discourse in her research into the communicative practices of staff at a boarding school. Family or team members are given a sense of belonging and pride provided that they behave or act in ways in which the team will be proud of them. Johannes reaffirmed his position as the leader who respected his elder and confirmed the pride and respect the team had for Manson.

- 100 B *Watter wires praat hulle van?.....*
 Which wires are they referring to...?
- 101 C *Die wires wat so gehaak het daarso.....*
 The wires that were hooking...there...
- 102 B *Maar het jy dan nie daai uitgesort nie (looking at C)*
 But did 'nt you sort out that problem ? (looking at C)
- 103 JV *Clive Plaatjies*
- 104 C *Maar daar moet iets gedoen word daaraan*
 But then something must be done about it.....
- 105 JV *Ne...*
 Yes....
- 106 M *Maar kan hy nie soort of 'n bar aansit nie ?*
 But cant he install some sort of bar there...?
- 107 JV *Daarso by jou...het jy gesien by jou by die teekas ?.....*
 There by you....did you see next to the tea cupboard..?

- 108 C Ja regbo.....is afgehaal....
Yes right on top....it is removed..
- 109 JV Maar weet hy dit ?
But does he know that..?
- 110 B As ons so iets kan kry daarso (gesticulates with hands)
If we can get something like that there...(gesticulates with his hands)
- 111 JV Sê weer.....
Say that again....
- B [.....10 sec.....]
- Long Pause.....25 secs
- 112 C Ek dink ons moet iets organise met daai...(referring to wire)
I think we must organise something with that...(referring to the wire)
- 113 JV Ja... ons sal iets uit vinder daarso....Maar nou doen jy ander ding daarso..
Yes we would have to do something there.... but now we need to something else...
- 114 B Maar die way ek gesien het moet ons daai ding oor bting.....
But the way I see it we must bring that thing over there...
- 115 JV Dit sê hierso..... Make a arm to keep wires up
It says here...Make a arm to keep up wires...
- 116 B Hulle het nou 'n verkeerde dinges...erm....
They now have a wrong thing.....erm....

(Employee Involvement Meeting 3 May 2000)

Lines 110 to 116 are illustrative of the trend of these meetings. Workers knew what their work related problems were and made suggestions accordingly, but were unable to verbalise or express these problems and suggestions adequately. Brian's attempt at expressing himself adequately in the meeting (line 110), highlighted the problem that these workers had. He knew exactly what the design of the supporting arm should look like, but could only express himself by way of hand gesticulations. His fellow team members responded to these gesticulations in a similar way.(lines 112 to 114) They understood his explanation, but could also not verbalise their responses. However, importantly, was that they all understood what was being explained and gesticulated, and thereby participated adequately and as required of them being team members in an EI meeting. Verbal expression by workers appeared to be problematic whether they used their hybridized language or English. Throughout my visits to the factory, I observed that workers had a major problem with verbalising what they meant or what their feelings were. Usually when they end up in this situation, i.e. not being able to express themselves, the topic or the discussion

closes somewhat abruptly or without closure, and the next item on the agenda will be discussed. It was no different in this meeting.

Although this meeting did not fit the conventional notions of a formal meeting, in the colloquial language used, and the informal ways of pursuing topics, nor did it follow the guidelines as it is set out by the Strongarms management (See Annexure 4 H), it however provided the conditions for the employees to become involved with their work setting and processes from a different perspective to which they were accustomed. i.e. the physical operation of their machines. Here they have a perspective on their work which is conceptual, language-based and discursive.

There was no formal agenda and hence no apparent sequence of events, though it is clear that the team leader had his own agenda which followed with the support of his team members. There were no techniques in operation; no problem solving diagrams or brainstorming moments that might be thought to be common practice in these types of worker meetings. There was definitely a “looseness” or fluidity about the meeting, evident by the way in which people talked simultaneously to each other on occasion, speakers were interrupted and here and there smaller conversations were conducted briefly while the meeting was in progress. The style of meeting could be characterised as “kitchen table conversations” (Hull and others 1996:130), this however, did not detract from the fact that the group met their own and employers’ expectations regarding their participation in an EI meeting. (Interjection: lines 111-112; talking simultaneously line :126) While the team leader clearly “drove” the meeting, nonetheless it is a good example of what Gee, Hull and Lankshear refer to as “distributed knowledge”, where the know- how and skills did not reside totally with the team leader, and there was space in the discursive patterning for multiple inputs. Lines 122 to 125 are illustrative of this point : When the team leader is at a loss;

- 122 Replace grubscrews with a magnet.....[.....].....Replace grubscrews with a magnet..
123 (*Mutters to himself looking confused*)...*I dont know what they want*.....
- N daai wat die pyp vashou man.....
- 124 *That which holds the pipe man*.....
- JV O...moet ons 'n magnet daar binne in kry???.....in place van die grubscrew...ons moet gaan kyk daarso...

O..we must get a magnet inside of that.....in place of the grubscrew.... We must go and look there
(Employee Involvement Meeting - 3 May 2000)

What readily came to the fore was that the literacy practices evident were based on the workers shared workplace knowledge, common values and social background. A “community of practice” (Lave and Wenger, 1991) or a system of “distributed knowledge” (Gee et al, 1996) could be said to be in operation. With regard to the literacy practices, there is clearly a sense that the literacy work is a specialised task of one or two cell members only, but that does not exclude the participation of others. It is also evident that the literacy tasks are not “simple literacy activities” in Hull and colleagues’ sense of the term, but involve situated ways of translation and recontextualisation, a process of to-ing and fro-ing between management literacy practices and discourses on the one hand, and worker discourses and know-how on the other. The successful literacy practitioner has to be able to cross both these worlds, and it is also evident that team members contribute collectively to the successful performance of these literacy events. This is manifested by the active communicative participation by the workers. (See Annexure 5)

Through their participation the team members engaged in identifying problems which impacted on production targets. They documented these problems in the form of suggestions and fed this information through to management for implementation. Although they could not fix most of these problems, they none the less succeeded in identifying and discussing them.

There were also indications that a good communicative rapport exists between the cell facilitator, the team and team leader. (lines 90-91). He was not physically present in the meeting, but his function as the “consultant” on all matters in the cell was evident. He guided, influenced, supported and stimulated the participatory functions needed by the workers to operate in this environment of work. Lines 90; 93;137;145 , provides evidence of the volume of documents the team members are required to consult, interpret and understand in order to function optimally in this workplace. (See Annexures 1 A - 4 H)

Conclusion

It is clear that these workers are in the process of “exchanging” their label of “physical hired-from-the-neck-down” to “liberated” or “empowered” worker. They were showing signs of being “thinkers, trouble-shooters and to a lesser degree problem-solvers” within their work environment. They were actively participating in the literate acts which these EI meetings demanded. Together with this participation, they displayed the ability to participate in the discourse of the meeting, and did so successfully by employing strategies like their “hybridized” language to negotiate the “official language” i.e. English, difficulties which they had. They were aware of meeting procedure, although the meeting was not formally constituted from the start, they knew about turn taking and discussion on a point. They also acknowledged Johannes as their chairperson for these meetings. These are clear indications that the literacy practices associated with the new work places such as Strongarms, were becoming entrenched into the way in which work was organised there.

Although this meeting at times seemed somewhat chaotic, it is important to note that important work was getting done. Examples of this important work was Johannes pointing out the record and time keeping problems of the KPI board. Another example of team work getting done was demonstrated when they reached consensus on the problems experienced with the tools and inner tubes. There are many more examples which indicated that much work was being done in this informal way. Coupled to the fact that work had been done was the high worker participation in this meeting. Considering the construction of this meeting, it makes one wary of imposed notions of what counts as a good meeting and what not.

I once again want to utilise two lenses which Hull et al (1996) used when they reviewed the literacy practices of the teams they were studying. They reviewed the literacy practices of the cells they were studying by ascertaining who was expected to read and write and in what situations and for what purposes, and secondly, they tried to understand how teams functioned within a range of activities. I will utilise their (Hull et al 1996) concept here, as this will set me on the focus areas I identified at the start of this chapter.

Clearly from the transcripts it can be seen that Johannes was doomed to do the official reading and writing tasks of the cell. (He acted as chairperson and had to submit the suggestions to the facilitator- line 94.) As the team leader it was “expected” of him to do the reading and writing, as the other team leaders were also expected to do. However, Ivan was singled out for the writing task by his peers, because he possessed the “writing skills” which was recognised by the bosses as the medium of communication. It was this “know how” of being able to read and write English which accorded him the responsibility to record the meeting minutes, whereas in Johannes’s case it was the fact that he was the team leader, and this task created the expectancy by both management and his team to perform these tasks. What we have here is that two men are performing the same task, but for different reasons. On the other hand there were also indications that some of the team members did not like to write (line 352), and this created a problem in the team regarding their output totals. Inevitably this responsibility belonged to Johannes who tried to delegate this responsibility to M and J with limited success. This gives us some indication that the team members regarded the function of reading and writing for their cell as the responsibility of their team leader. Nonetheless within this division of labour, a full participation by all members in the literacy event was noted and described above.

In terms of what the range of literacy activities were for the team, it is useful to understand what kinds of activities were expected of them in an EI meeting. For the best part of most meetings which I had attended, I found that the teams were required to identify and bring their problems to the meeting. The amount of suggestions to improve production processes brought to these meetings, were very minimal in comparison to the problems brought. However, problem solving actions such as brainstorming or analysing were rarely taken by the teams concerning the problems which they had uncovered. In the most common scenario, a problem would be identified and characterised, and never mentioned again. (The transcript above on pages 50 - 53 characterises this.)

A possible explanation for the above problem could be that a void existed between workers conceptualising a problem and having the ability to take action on it. One could argue that teams do not know how to progress to the next step or they had not been taught in their training sessions how to take the next step to solving their problems.

On the other hand I also need to point out that generally workers were willing to follow instructions from management to bring about changes which addressed their problems, rather than enquire and question to problem solve themselves.

For the most part these workers valued and enjoyed these literacy rich EI meetings. My observation was that it created for them a sense of “empowerment” or a “voice” for them, in that they could have direct input into the production process and workings of their cell. It was a situation in which they were very comfortable and relaxed while going through the routines and processes of the new work place, meeting deadlines, demands and targets and calling it broadly, “empowerment”.

Chapter 5

Culture, Identity and Literacy Development at Work

In this chapter I once again report on the literacy practices in an Employee Involvement meeting. This meeting was one of many which I had attended with the Gas Springs Cell, and I will highlight some of the literacy practices of Donald, who is the night shift team leader, and also a “man with a mission” in this meeting. By focussing on Donald in this meeting, I aim to illustrate how the new forms of work organisation, such as teams, focus group meetings and the like, sometimes provide a hybrid space in which employees are able to address problems which arise between them or between their teams, while companies simultaneously press for improvements in quality and productivity in these meetings.

I will draw excerpts from the employee involvement meeting transcript (13 June 2000) to make pertinent points during my discussion. When I reflect on my experiences of all the cell meetings which I had attended during my research period at Strongarms, I conclude that this cell, both the day and night shift teams, was by far the most organised and rehearsed in terms of meeting structure and procedures.

Background

Donald is the night shift team leader, who together with Mario decided to change their sleeping patterns for that day in order to attend the day shift EI meeting. Rumour had it that Donald was dissatisfied with the fact that Errol was appointed as the day shift team leader ahead of him, this despite the fact that Donald had more years of experience than he did. It was an open secret that Donald dearly wanted to work the day shift for personal reasons, but this was not to be. In this meeting subtle evidence of his frustration with having to work the night shift surfaced early on. Donald, as such “informed” Errol that he had had enough of the night shift, and that he (Errol) must now consider taking over the shift from him. He informed Errol about his intentions before informing the foreman, and had done this just in case Errol saw this request to work the day shift as a “backbiting exercise”. This is how Donald put his “request” to Errol :

D ek gaan nie in die nag werk nie...daai is 'n nog 'n ding...jy moet 'n plan maak...my

gesondheid is nie daarna nie..vir nagwerk...jy moet gaan praat..

104 *I am not going to work night shift...that is another thing...you must make a*
105 *plan...my health is not as it should be.for working nightshift ..you must go and*
106 *speak...[to the bosses about this ..]*

E so moet jy dit discuss..

107 *So you must discuss it.....*

D Jy hoor dan nou...ek gaan nie...Ek gaan vir Tommy nog sê en vir Walters...die is te lank ek is weer te lank op nag..

108 *You just heard me...I am not [going to work night shift] I will still inform*
109 *Tommy and will tell Walters...this is too long that I am on night shift...*

E Daarom vra ek mos nou...moet jy nog gaan praat....?

110 *That is why I am asking now.... must you still go and inform [them]...?*

D saam met wie..?

111 *Inform who..?*

E Saam met Tommy hulle...

112 *Tommy and the others....*

D Ek moet eerste met jou praat...jy en ek met praat....nou weet jy die storie..nou kan ek verre gaan ..maar as ek eerste na die voorman toe gaan..en ek sê here.....

113 *I must first inform you...you and I must talk...now you know the story..now I can*
114 *take it further...but if I should first go to the foreman...I I tell them...*

E Dan loop jy agter my rug...

115 *Then you will be going behind my back....?*

D Dan is wat jy gaan dink...ek weet nie...

116 *That is what you will think...isn't it...?*

To compound the situation between Donald and Errol further, the shifts they were working experienced problems with producing quality products. This added to their personal frustrations as well. These “quality problems” which they were experiencing, had their origin at the supplier’s plant in Spain, but the effects hereof were being felt by two teams of workers some two thousand kilometres away on another continent where these workers were battling to produce quality shock absorbers with sub-standard materials. The low volumes of quality approved products that were produced by each shift, was indicative of the magnitude of the problem.

- J one eighty.....
- 215 *One [hundred] and eighty*
- D one eighty...ek het vyfhonderd gepak...daai is tussen twee shifts nog nie eers ..nege honderd nie ..sewe honderd nie ...en die bou ...is ..hulle het nege honderd ..nine forty gebou...gistraand ons het maar net one fifty gebou..Kyk daar... daai is nooit genoeg vir twee shifts nie..Hou dai in jou gedagte...daai total..
- 216 *One hundred and eighty... I packed five hundred...and that is between the two*
- 217 *shifts not even nine hundred..seven hundred...and the building is..they had nine*
- 218 *hundred ..nine forty was built last night...and we only built one fifty...look at at...*
- 219 *that is never enough for two shifts... keep that in mind... that total....*

There was a definite feeling of uneasiness at the start of this meeting. One could somehow sense this feeling by the expressions and body language of the team members present.

I have mentioned previously in this thesis that workers at this factory were required to do a fair amount of reading and writing as well as interpreting data (see Chapter 3), this besides being required to perform the physical aspects of building quality shock absorbers.

However, when focussing on the literacy practices in the workplace, it has become somewhat customary to characterize it as reading and writing for the purpose of mediating action and to contrast that purpose for literacy with school based ones. Some researchers have helpfully categorized literacy at work as “reading to do” as opposed to school-based literacy, which is

“reading to know” (Diehl and Mikulecky, 1980). Others have contrasted “useful literacy” or “practical literacy” learned through apprenticeships in families or communities with “informational literacy” learned in school. (Resnick, 1989; Rogoff, 1990; Lave and Wenger, 1991).

For the purposes of this case study I selected a “lens” to situate and view the literacy practices of Donald. Gee (in Hull, 1996) offered a view on literacy from a socio-cultural perspective, he viewed literacy as being “social”, as activities where people write, read and talk about texts, hold certain values and attitudes about them, and interact with others around them in particular ways. This view joins literacy to social, institutional and cultural relationships instead of bracketing reading, writing and language activities as decontextualised or neutral skills or purely psychological processes.

Hence by looking closer at the language activities which constructed the literacy practices of Donald, these practices included both the verbal and non verbal, I aim to show how literacy indeed has a social, institutional and cultural relationship in practice and how these practices “connect” with the prescriptive new work order meetings, creating hybrid spaces which workers use to address their personal work related problems.

Literacy at Work

Donald is known to be a hardworking and dedicated team leader. When the human resources department invited the team leaders to attend a workshop on grievance procedure, he reported back to his team as normal after this session, bringing back with him the various hand outs which they had received. After he completed his report back, he left the various copies of these forms in the “green area” (rest area) for his teams’ further perusal. However, when he returned to work the following night he found that somebody filled out one of the “warning notices” which he had left there the previous evening. On this form, which was pinned to the KPI board, was written the name of the cells’ safety representative, with the following comment :

“...and walking around during working hours and like to talk to people...”

Donald was visibly upset by this statement on the board and expressed this in the following way:

19 *You cannot do something*
20 *like that ...that's my personal feeling...that is the team leaders job.that's black*
21 *files. Now it's in the green area and everybody can see it. It is not nice. This is*
22 *my personal feeling, even though you [all] take it as a joke....*

(Employee Involvement Meeting 13 June 2000)

Donald was upset and annoyed by the fact that such personal remarks about their fellow worker were so prominently displayed so that the entire factory floor could see it. The remarks were linked to the fact that the safety representative had been reprimanded by management the previous week for walking around and being unproductive, however Donald still felt that such "black files" (lines 20 - 21 i.e. confidential or personal information) as he put it, should not be displayed for all to see. To compound the matter, he discovered that it was not the day team leader (it was a responsibility of the team leaders to fill out and complete these forms) who had written the notice, rather it was one of his team members. This infuriated him even more, as he would have expected the team leader to do this function and not a fellow team member. Donald was visibly upset with this scenario, judging by his body language and in the way he stared and glared at the person who had filled out the form. Donald's reactions indicated strongly that he was a person who placed value on the respect and integrity of his fellow worker. Having learnt to know him for the length of time I conducted my research at the factory, there is little doubt in my mind that Donald reacted the way he did, in defence of his colleague's respect and dignity. For him therefore, "black files" were personal and not for the perusal or scrutiny of the entire factory.

What the above vignette illustrates is a glimpse of Donald's social values. It was evident that these social values strongly influenced his literacy practices, and accordingly the display of the warning form was contrary to these values. This scenario supports Gees' notion that when literacy is viewed from socio-cultural perspective it can be connected to , amongst others, the way in which people interact with people around them. At the conclusion of this very brief discussion, it was noticeable that no apologies or corrective actions were cited by either Donald or Errol. This was an indication to me that both parties felt differently but strongly about the issue.

The meeting continued in a lively manner, with most of the talking being done by Donald and Errol. Accusations, problems and possible solutions were the order of the day during these discussions. The discussions in this meeting centred primarily on the quality problems that both team were experiencing. As it progressed, it became more and more apparent that the output totals were far too low and deeply problematic. This was worrying to Donald and after further discussion he even felt personally responsible for the low output totals of his team. This prompted him to express his disgust towards himself and the rest of the teams for only being able to manufacture five hundred products in total between the two shifts.

D ne...daai is wat miskien nou dink... 'jy doen jou eie kopse ding'.... is nie daai nie
(E remonstrates to this statement)...ek print..ek wil either van daai werk laat uitkry
want ek weet daai is nie die ...maar in die meantime dink ek "Here"net vyf
honderd...

204 *No...that is what you may be thinking now... "you do as you please" ...its not that..*

E (Remonstrates to the statement of Donald that he does as he pleases.)

D Continues to explain to Errol the method he uses, which may appear to another as
if he "does as he pleases.."

205 *..I print ..I either want that work to go out*

206 *because I know that is not the... but in the meantime I think.. "Lord" only five*

207 *hundred..*

(Employee Involvement Meeting 13 June 2000)

In the above excerpt Donald clarified his position with Errol who he believed may have been under the impression that he was "doing as he pleases.." and did not care about the low output. Donald tried his best, even if it meant that he had to change the sequence of production by printing the products (this is the penultimate stage of production) before it reached that stage of production, all he wanted was that the products move from his cell to the packaging area. Even this did not soothe his "conscience" as he knew that five hundred items were far below the normal output totals of the cell.

Donald's remarks (lines 204 - 207) highlighted another aspect which had become a driving force in the new work place. It is the fact that workers had become more involved with the manufacturing process and as such had "taken it upon themselves" to be self critical within this process. This characteristic of "self surveillance" (O'Connor 1994) to which workers in restructured work places voluntarily subscribe, (normally by way of signing the company mission statement or in training workshops) when translated by workers into their work procedures, they call it "empowerment". It is a notion where workers are in "control", and will "punish" themselves or each other when they under produce or under perform. Lines 215 - 219 is illustrative of this point of how workers in the new work place had readily accepted "self surveillance" as part of their working conditions.

I now want to turn my focus towards the institutional literacy relationships which Donald engaged with while participating in this meeting. It was clear that these meetings favoured the needs of the institution and its employees. It was at these meetings that the employer could stress their objectives and highlight production targets, both negatively and positively as the situation may be. The employees on the other hand could also use this platform by expressing their views and suggestions in terms of the work processes and conditions. This was indeed the core function of these meetings, and Donald's behaviour conformed admirably to the expectations of this forum. His concerns in this meeting about low production and staff behaviour shows this clearly. It was also evident that his work-related experience was highly valued by all in the meeting. This was evident by the authority and manner with which he dealt with the process related problems. However Donald's literacy practices extended beyond the taken for granted or mandatory "suggestions and problem solving" exercises in which the teams were obliged to engaged. Donald had developed a "workplace identity", and this phenomena had become synonymous with the new workplace. In the "new work place culture" the worker accepts the mantle of responsibility and becomes decision maker in the name and interests of the company. The workers imagine themselves as business people and act as if they were the business (Kalantzis and Cope in O'Connor, 1994). Hence devolved budgets and EI meeting participation are highly valued areas of participation by "committed" new work order employees. Workers also use these forums to gauge and reflect on their value and commitment to the company.

The “new work culture” is characterised by workers who concern themselves with all aspects of the business to the point where they, (workers) become “entrepreneur or chair persons of the corporation they run.” This was also the case with Donald, and was demonstrated by the concern he had for the poor profit margins of the company which he equated directly to the problems in their cell. This is how he made this point to Errol :

- E Hulle maak niks op ding nie....
224 *They don't make anything [profit] on that product...*
- D Op die oomblik nou nie....want diehulle kry daai ding vir twintig
rand...seventy, eighty five rand units....
225 *Not at this point no... because the..they get that thing [product] for twenty rand. 226*
seventy, eighty five rand units...

And to push his point home, he calculated the cost of the product by using hypothetical values proving that the company was not making any money.

- D Ja...nou wat sê daai vir jou?...
319 *So...what is that telling you...?*
- E Daai sê vir my ek moet ander material kry...
320 *That tell me I must get other material...*
- D Maar dit sê vir jou basies jy sit met 'n loss....jy sit labour in...maar jy kry niks
daaruit nie..is 'n loss....
321 *But that is basically telling you that you are sitting with a loss... you put in*
322 *labour... but you are not getting anything out... it is a loss..*
- E dan worry dit.....
323 *Then it worries.....*

D SO.....(startled).....jy..as ons die side kan claim teen aan die suppliers ..en sê right kyk hier...ons het “x amount” van die operation in daai tube ingesit...en jou material is no good ..ons claim “x amount” geld terug....by julle....want daai is wat A..(Customers’name) saam met ons doen....ons ship dit..hulle ship dit terug...ons moet betaal...vir daai shipping...hulle een shipping was elf duisend rand.....maar maak ons klaar niks profit nie.....so..is ‘n hele..op die einde van die dag kry daai mense daai hulle parts verniet ...en ons het ‘n klomp dae daarop gewerk maar ons (company) kry niks geld nie....

324 *SO !!! (startled) if we can claim [on this side] against the supplier and we can*
 325 *say look we have “x amount” of the operation being put into that tube... and*
 326 *your material is no good... then we want to claim “x amount” of money back*
 327 *from you because that is what A (Customers’ name) does to us.. we ship it , they*
 328 *ship it back.. We have to pay for all that shipping , their shipping was eleven*
 329 *thousand rand ...already we are not making any profit...so it a whole ..at the*
 330 *end of the day those people are getting the parts for free... and we worked*
 331 *many days but (the company) is not getting any money....*

(Employee Involvement Meeting 13 June 2000)

Very strong evidence is presented above towards supporting the claim that the literacy practices of Donald were influenced by his loyalty and concern for the company (institution) and his position as one who was not contributing towards profit making. This is a far cry from previous work organisation practices where workers were “hired-from-the-neck-down” and supports Farrel (1999) and Scheeres (1999) claim that workers are being reconstructed into “new types” of workers. Workers who like Donald are able to run a gamut of literacy practices (See Annexure 6) within the constructs of the new work order provides rich and fertile grounds for this Discourse (Gee 1990) to flourish.

Lastly, I want to comment on what I believe was a good demonstration of the effects of the new work order and its’ “empowering effect” on workers. When Reginald, the facilitator, joined the meeting Donald immediately demanded that he gave his undivided attention to them and their

“quality problems”. Although there had been consensus amongst the meeting attendees that the tubes were of a poor quality, Donald also believed that there was another contributory factor to their poor performance. He contended that their customer was unsure of what their manufacturing requirements should be, and as a result hereof, they (Strongarms) were given insufficient manufacturing data. Again Donald voiced his dissatisfaction and categorically stated that he and his team were becoming fed-up with the situation. He threatened to stop his production run until he was given clear written manufacturing instructions.

D Van die begin af doen ons wat hulle vra...right?...maar dan kom hulle terug dan sê hulle nee nie so nie...so...ne..van die begin af..met die paymask..masking..almal daaisê vir hulle “Hold it tot hier toe en nie verre nie.....kry julle act...alles in order soos julle dit wil hê dan kom julle terug na my toe” As ons elke keer so gaan werk...hulle gaan ons in die rondte gooi soos hulle wil...as jy sê gee vir ons ‘n’n layout of wat....ever..soos hulle nou sê hulle wil so en so..gepak hê..eerste het hulle ons rond gegooi..nou weet ons mos..exactly hulle wil dit so gepak hê....nou gee vir ons ..wat is goed...wat is nie goed nie....hoe wil julle dit hê..klaar...ons...

305 *From the beginning we are doing as they ask..correct..? but then they come*
 306 *back and tell us no..not like that. Right from the beginning with the*
 307 **pay mask...masking all of that ...tell them..” Hold it ..until here and no*
 308 *further...get your act together...if you want everything in order as you want*
 309 *it... then you come back to me”... If we constantly work the way we are,..they*
 310 *will mess us around as they please ... tell us... give us a layout of what [is*
 311 *required] whatever so as they now say how they want it packed... first they*
 312 *messed us around .. But now we know exactly what they want ... now give*
 313 *us....what is good..... what is not good.... how do you want it ...and*
 314 *finish...we....*

(*The pay masking process of the products was renegotiated several times during production before the customer was happy. Donald claimed that had they received clear and accurate instructions from their customer at the beginning stages already, the company would not have lost

money at re-manufacturing)

His frustration with the situation of being “messed around” culminated when he suggested that their customer take his business elsewhere, even if it meant taking it to their market opposition.

E Ja maar die ander punt is die..hulle wil daai gas springs hê....

332 *Yes but the other point is... they want those gas springs.....*

M Dan moet hulle B (competing company) toe gaan.....Hulle wil dit hê dan moet hulle nie vol dinge nie....

333 *Then they must go to B (competing company)... if they want those things they*

334 *must not be full of nonsense...*

(Employee Involvement Meeting - 13 June 2000)

What the above highlights clearly, is that as workers become empowered, they become bolder and bolder in their concern for company profits. Attached to the concern of company profits (whether it is high or low) is the fact that workers who display this concern are challenging and resisting authority through their literacy practices, to highlight these concerns. (Also see Chapter 3)

An example of how workers even in these meetings become bolder and bolder in their approach to problems, rather than placid acceptance as had been the case before, was noted. Initially the teams were content to seek a solution to the problem. Even their proposed solutions varied in complexity as the meeting progressed to a point where the suggestion was made that their customers go elsewhere.

Their first attempt at solving the problem was a suggestion to sort the tubes and separate the defective ones from the good ones.

M Jy laat een man die tubes uitsort.waar die ander ouens die bou kan doen...

141 *You let one person sort out the tubes and the other guys do the building [of the*

142 *products]*

They soon realised that this was going to be time consuming..... It was then suggested that they work at weekends and do the sorting....

- J Maar ek dink ..ek wil..kom met 'n suggestion. Hoekom het hulle dan iemand kan
kom op 'n Sondag of 'n Saterdag en die tubes uitsort..en wanneer ons op 'n
Maandag inkom dan kan ons net bou...
- 154 *But I think I want to come up with a suggestion. Why don't we get somebody*
155 *to come in on a Saturday or Sunday and sort the tubes ,and when we come to work*
156 *on a Monday we start working immediately ?*
- E Dit gaan nie werk nie...
- 157 *That is not going to work...*
- J Hoekom nie..?
- 158 *Why not...?*
- D Dit kan werk....right...Sondae is overtime...dis double (the rate of pay)..die
company wil nie meer double gee nie..Sondae nie..
- 159 *It can work...right? Sundays are overtime...that's double time (rate of pay) the 160*
company does not allow Sunday work anymore...

They encountered yet another problem : Strongarms were not willing to pay their workers overtime to work weekends..... The suggestions then became bolder....

- D Hoekom kry hulle nie hulle supplier of sê vir die supplier ..kyk hier jou quality
is nie up to standard nie vir ons customers nie
- 178 *Why don't they get a supplier or tell the supplier listen here your quality is not*
179 *up to standard for our customers.....*

The above suggestion to find an alternate supplier was not pursued but a suggestion to fly or ship the tubes in was mooted next. This was possible as it had been done previously, although with a slight hiccup. It was clear that these workers were exploring all the options they were aware of in search of a solution to their problem.

D Omdat die tyd van A to B is te lank...ne..toe..sny hulle daai..nay toe laai hulle daai tubes op die plane toe drop hulle dit op 'n ander plek af om rede die olie het gelek die bondel uit.....toe moet ons bokse stuur vir hulle ..sê toe moet hulle dit afsny dat dit kan fit in daai box in ...toe vlieg hulle dit weer daarvandaan na ons toe...

189 *Because the time from A to B is too long hey they discontinued that .no.so they*
190 *loaded the tubes on a plane and dropped it off at another place because the oil*
191 *leaked out of the bundle. so we had to send boxes to that place and they had to*
192 *cut it so that it could fit into the boxes....and then they re-routed it back to us..*

E Maar luisterhulle gesê as.....toe het hulle dit geskip..hulle het dit geship...met die skip gebring daarom het ons so lank gewag daarvoor..die skip het dit gebring Toe het hulle daai problem in Durban ...hulle het die pype in die verkeerde plek gaan aflaai ...in Durban..plus van in die Kaap...

193 *But listen they said...they shipped it ..and therefore we waited so long for*
194 *it...because the ship brought it. Then they had that problem in Durban..they*
195 *offloaded the pipes at the wrong place...in Durban instead of Cape Town.*

D Maar ek meen hoeveel...watse onkoste is daai..?...maar hierso is 'n customer wat vir ons blame ..ons se production raak agter maar hulle kan daai doen nie. Kry 'n shipment in....betaal eenkeer

196 *But I mean.how much..? what are those expenses? but here a customer blames*
197 *us ...our productions gets behind but they can do that..Get a shipment and pay*
198 *and get it over and done with.....*

(Employee Involvement Meeting - 13 June 2000)

Whichever way they tried to solve their problem, they encountered one or other hitch. This had become frustrating to them all, and together with the fact that their customer had given them insufficient manufacturing data, this prompted Donald to boldly suggest that their customer go elsewhere for their product.

Viewed against the background of the company mission statement which claimed that they were “.....dedicated to achieving total customer satisfaction by providing quality products and service....”

Donald's sentiments about their customer is highly contradictory. However when viewed against the backdrop of the pressures and stresses (See Chapter 3) that these workers have to endure because "they have taken the responsibility" of customer satisfaction and were fed inferior material to work with by the company, one can hardly blame Donald for stating his opinion in the manner in which he did. Once again the role of the facilitator as the "expert" (See Chapter 4) came to the fore as he tactfully explained to them (See Annexure 7 -lines 356 - 380) other factors which they had not considered in their discussions about their quality problems. At the end of this discussion they agreed on a system which they would implement assuring them that they would be receiving quality materials in the future.(See Annexure 7 - lines 365 - 372)

The meeting ended very positively with Donald and Errol agreeing to working together more closely in the future. They agreed to jointly draw up a proposal which would motivate the need for the cell to be allocated an assistant day shift team leader. Clearly the tension which had existed at the start of the meeting between Donald and Errol had eased tremendously, even to the point when they left the room they greeted each other as "ou pël" (meaning my friend- See Annexure 7- line 716). A very positive way to face the pressures and stresses of working in teams in a restructured work place.

Conclusion

Current literacy theory has broadened our understanding by including the notions of context, suggesting that we understand literacy as a part of the larger historical, social and cultural milieu when exploring the ramifications and effects it has in our daily and working life.

Reflecting on the literate activities of Donald, it can be seen that he commandeered his literacy practices during this meeting in such a way that he created space to address the personal problems which existed between the teams. He strongly and tactfully gave his opinions on the treatment meted out to the safety rep. He addressed the housekeeping problems about cleaning up after shift (See Annexure 7- lines 54 - 100) in such a way that it spelt out the responsibilities of each team and how they should rather co-operate in the processes rather than work contrary to it.. These points were not placed on the formal agenda, however he created space for these topics to be discussed,

thus working towards finding solutions and also diffusing the tensions which had been created between the two teams. When we consider that Donald had also come to this meeting to address some of the personal issues which had been bothering him, i.e the warning notice issue of the safety rep, the bad housekeeping allegations of the day shift and the night shift issue with Errol, then it is clear that he displayed the ability to appropriate this meeting designed for the purpose of discussing quality issues and used it as his own forum to heal the growing rift between the teams. This proved to be beneficial to both the teams and management as both parties left the meeting inspired and more trusting of one another.

Donald also demonstrated his ability to solve delicate situations. Although he used a “strong arm” tactic by threatening to completely stop production until he had all the relevant process data, this displayed his judgment and process knowledge in what his rights and limitations were towards the company and their customers. By doing this he displayed his ability to use literacy to assert authority. It was also very clear that he had the full support of the team members when this topic was broached with the facilitator as they all nodded their approval all the way through as Donald was putting his point of view over. During this specific interaction where the quality problems were discussed with the facilitator, Donald proved inexplicably that he possessed all the necessary literacy demands needed to be successful during this communicative encounter.

Lastly, Donald displayed a vivid sense of the culture and identity of the “restructured worker”. With this meeting as evidence, it can be shown that he had fully bought into the ends/goals/vision of Strongarms and therefore pro-actively took responsibility for the total ramifications of his and his teams work in the organisation as a whole as well as for the results (profits and losses) of the organization. This is reflected in his concern about the suppliers’ sub-standard materials, the quality and output of the products as well as the profit and loss margins of the company which he aptly described with hypothetical values during his explanation to his colleagues. These are strong pointers to a developed work identity (Strongarms identity) which is supported by fluent and relevant new work order literacy practices.

In conclusion I want to refer to Donald’s expert use of literacy in exercising critical judgement. Throughout this meeting he was able to utilise this aspect literacy, and I believe that he could only have achieved this through the development of his social identity which he constructed for himself

on the factory floor. I am convinced that Donald had found a space for participating in the work of teams, as the company desired, and for shaping teamwork towards the collective good.

Hence ways of reading and writing (whether from the KPI board, agenda or warning notices) can be seen as companions to ways of talking, acting, interacting, valuing and being in the world, including ways of constructing an identity as a worker. (Gee, Hull, Lankshear, 1997)

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Chapter 6

Conclusion

One of the most hopeful parts of this study has to do with the way in which front-line workers were able to exercise critical faculties, negotiate solutions to problems and generally act in self directed responsible ways. These specific moments to which I refer, had nothing to do with work place ideology or organization, in fact one could say they happened contrary to them.

Telling cases in which these moments are visible, were well portrayed by Farrida (See Chapter 3) when she finally refused to accept the “signing off” instructions of her engineer and Donald (See Chapter 5) who challenged both the social values of his colleagues and the quality standards of their materials supplier. Because Farrida felt “challenged or threatened” by her engineer’s lack of understanding of what she as a team member valued, in a new work organization, (I.e. manufacturing products of the highest quality and providing customer satisfaction) she resisted and challenged his authority to “sign off” the products which she believed were defective. No doubt, it was Farrida’s ability to “run the gamut of literacy practices” (Hull and others, 1996 - See Annexure 6) that enabled her to react towards her engineer in the way she did.

Another example of how the workers acted in a responsible way at Strongarms was highlighted by Donald with his handling of the “situation” which had developed between himself and the day shift team leader. (See Chapter 5) This scenario portrayed an important characteristic of the new work order which lays claim that workers mediate the power structures, whether it be amongst themselves or between them and their supervisors in order to make their work places more humane and fulfilling Gee, Hull, Lankshear. Donald demonstrated how he had to mediate his “working space” so that it was more “humane” for him personally, this space otherwise, would have been constituted in a “faceless capitalist system” (Castells, 1999). In such a system, Donald’s skills and social values would undoubtedly have been oriented to quantifiable outcomes, packaged and measured against ‘world class standards’ where ‘humanness’ was non-existent.

Throughout this thesis I attempted to demonstrate how literacy had been interwoven in a situational way which in turn facilitated the institutional, social and cultural relationship of the workplace in which the workers operated at Strongarms.

I have also very broadly demonstrated that “worker empowerment” (in Gee’s context of the term) was reserved for those who truly strove to acquire it within the framework set up by management. While workers like Farrida and Donald were championing the ethic of worker empowerment, others, and notably those who “did not fit” the discourse of the “operating system” felt alienated and dis-empowered. Other team members again elected to remain silent and go with the flow of the system, thus dis-empowering themselves and condemning their future in this workplace, to being mere “extensions “ to the machines they operated.(See Chapter 4)

It is well documented that work practices in the “old capitalist system” are alienating where workers were forced to sell their labor often with little mental, emotional or social investment in the business. Today workers are asked to invest their hearts, minds and bodies fully in their work. They are “ asked to think and act critically, reflectively and creatively”(Gee and other, 1996: 7).

Accordingly the above quote from Gee sums up the differences and demands between the “old way of work” and the ‘new work order” adequately. In the new system of work, workers are “asked” and not “instructed” as in the “old Tayloristic” methods of working. Within the constructs of the new way of work, “asking” workers to invest in their work practices leaves these workers with a choice to accept or reject work under these specific conditions. When translated, the request really means ... “..are you prepared to adapt and change to this new system of work, and if you are not prepared to change, then please make room for somebody who is prepared to undergo or make this change..”. My understanding of the workers at Strongarms, having spent these few months here, were that they firstly were not too au fait with answering the call of acceptance to change, and secondly they did not fully understand and comprehend the impact which this change brought about. (i.e. meetings of all sorts, a new discourse to be learnt, flatter hierarchal management structures etc.) To complicate the situation some what, workers were also grappling with the associated literacy practices which accompanied this new work place.

What comes out clearly from this thesis was that workers were engaged in the developmental stages of implementing new work order practices. Examples of these stages and the accompanying uncertainty were visible in the number and types of suggestions workers made towards improving work processes. Workers were identifying problem areas in the production processes without offering much solutions to these problems. Offering suggestions for improved production processes is foundational to the notions of shared knowledge and flattened hierarchal structures in

the new work place. Other evidence that Strongarms were still in the developmental stages of new work practices is characterized by the somewhat rigid vertical hierarchal structures still present. These hierarchal structures were visible inter alia in : (a) the fact that team leaders were the taken-for-granted chairperson of all the cell meetings by both management and workers, (b) that only team leaders spoke on behalf of the cell when communicating with management, (c) the fact that management still adopted a “top-down” approach to problems (Farrida’s case), (d) the fact that management still “bullied” their sub-ordinates into conforming to their instructions (Farrida’s manager issuing signing off instructions), (e) the fact that management still expected that the communicative system between workers and themselves be conducted in English although 90% of their work force was Afrikaans speakers.

The reasons for these hierarchal structures still existing after implementing new work strategies almost five years ago may be varied and possibly substantiated. However varied and substantiative these reasons may be, what had come out strongly in this thesis was that workers needed to develop a literate identity to function optimally in the (present) system. The team leaders in the case studies are proof of this statement, they had acquired a certain level of adeptness in the system which had made them comfortable around the paperwork and computer practices which had become part and parcel of the new way of work. It had become imperative for workers desiring to “fit in” to the new way of working to learn how to conceptualize their work in terms of written and graphic representations as well as being able to master and manipulate the social rules that govern literate activities in their work environment. Hull et al (1996)

Whether workers at Strongarms were exposed to and presented with the rights and opportunities Hull et al (1996) to develop a literate identity, is a question entirely of a different nature and does not fall within the scope of this thesis.

In conclusion, this thesis substantiates the findings of Hull and others (1996) that “high prestige” literacy functions such as those connected to challenging authority, problem solving and exercising critical judgement are most often associated with and available to those in positions of authority. Like the instances of team leaders, cell facilitators and engineers here at Strongarms, they were people in positions to voice their opinion and views. The “lower prestige” literacy functions such as recording or using text to explain was reserved mostly for those who found themselves in the “front line” worker category. These workers, some of whom were quite happy to write out “OK tickets”, fill out the KPI board shift information and take “first off measurements” would revert to

complete silence when the opportunity presented itself (like in focus, start-up and E.I. meeting) to engage in the higher order ranges of literacy practices.

From my experiences at the Strongarms factory, I finally concluded that the level or degree of worker empowerment is directly proportionate to or associated with the type of literacy practices the workers engaged in. The more the worker “runs the gamut” of literacy practices (Hull et al, 1996 - See Annexure 6) the more empowered such a worker appeared to be.

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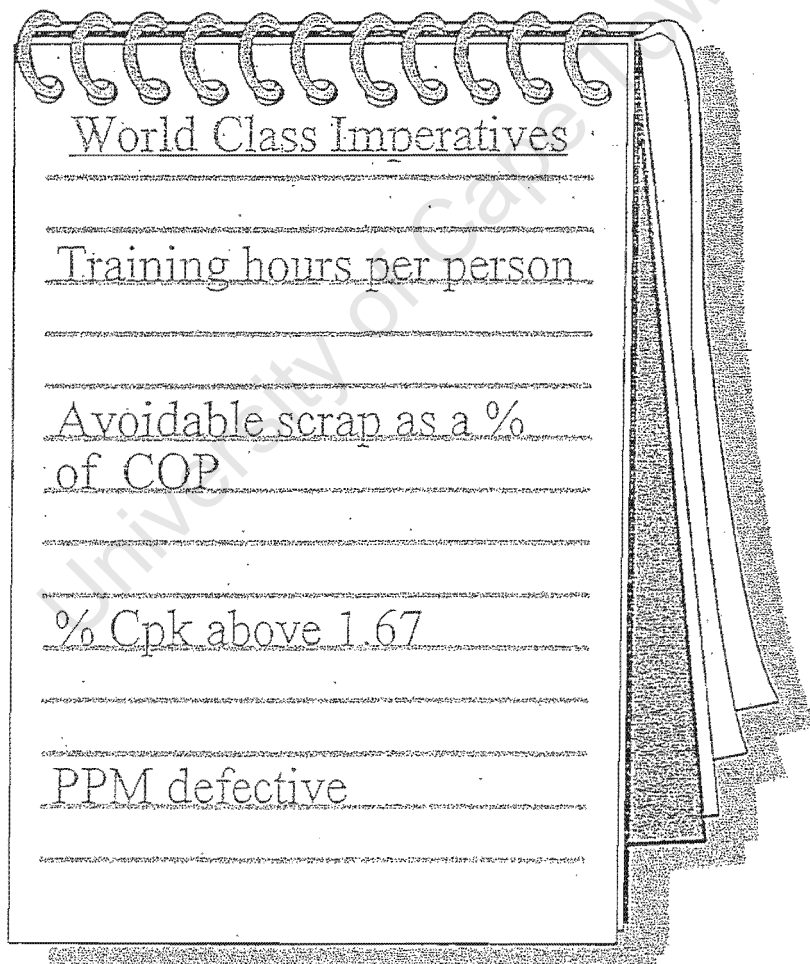
ANNEXURES

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ANNEXURE 1 (A)

BOS CHARTS

Measures Calculations



World Class Imperatives

- Training hours per person
- Avoidable scrap as a % of COP
- % Cpk above 1.67
- PPM defective

ANNEXURE 1 (B)

Suggestions Per Employee Per Annum.

$$\frac{\text{Total Suggestions Raised Since January.}}{\text{No Of Employees in cell}} \times \frac{12}{\text{No Of Months}}$$

EXPLANATION :

IT SHOWS IF THE NUMBER OF SUGGESTIONS RAISED PER EMPLOYEE PER MONTH IS ON TARGET TO ACHIEVE THE 15 PER EMPLOYEE PER YEAR TARGET.

Explanation :

Minimum Suggestion Requirement Per Employee Per Year
For Level 1 Certification = 15.

This Relates To 1.25 Suggestions Per Employee Per Month.
(15 suggestion per year requirement divided by 12 months.)

Therefore If There Are 12 People In The EI Team Then The
Team Would Require 15 Suggestions To Be Raised Per Month.
(12 people multiplied by 1.25 suggestion per person requirement.)

Taking This Size Of Cell And It Is The Month Of May Then The
Calculation Would Read As Follows.

Total Suggestions Raised To Date Would Be
15 Per Month x 5 (As May Is The 5th Month) = 75

$$\frac{\text{(Suggestions Raised)}}{\text{(Team Members)}} \times \frac{12}{5} \frac{\text{(Months Per Year)}}{\text{(Month)}}$$

$$75 \text{ divided by } 12 = 6.25 \times 2.4 = 12 \text{ divided by } 5$$

This Then Equals 15 Which Says If The Cell Continues To Raise 15
Suggestions Per Month Then It Will Achieve The Goal Of 15
Suggestions Per Team Member Per Year.

ANNEXURE 1 (C)

% Of Suggestions Implemented

$$\frac{\text{Suggestions Imp Since January}}{\text{No Of Employees In The Cell.}} \times \frac{12}{\text{No Of Months}}$$

$$\frac{\text{Total Suggestions Raised Since January.}}{\text{No Of Employees in cell}} \times \frac{12}{\text{No Of Months}}$$

EXPLANATION :

IT SHOWS IF THE NUMBER OF SUGGESTIONS IMPLEMENTED PER EMPLOYEE PER MONTH IS ON TARGET TO ACHIEVE THE 85% IMPLEMENTATION PER YEAR TARGET.

Explanation :

Minimum Suggestions Implemented Per Employee Per Year
Required For Level 1 Certification = 85%

Therefore A Cell Of 12 People Would Be Raising 15
Suggestions per month To Achieve The Suggestions Raised
Target Of Which 85% Need To Be Implemented To Achieve
The Implementation Target.

85% Of 15 = 12.75.

So The Cell Will Have To Implement 12.75 Suggestions Per
Month To Achieve The Target Of 85% Implemented Suggestions.

ANNEXURE 1 (D)

% of employees cross trained.

$$\frac{\text{No. of employees cross trained}}{\text{No of employees in the cell}} \times 100$$

EXPLANATION : The number (as a percentage) of people in the cell who can set and operate at least 4 machines in the process.

Example :

If the cell in question has 12 team members and only 10 can set and operate 4 or more machines in the cell then the calculation works as follows.

$$\frac{\text{(Employees cross trained.)}}{\text{(Employees in cell.)}} \frac{10}{12} \times 100$$

To change to percentage

So 10 divided by 12 = 0.85

This is then multiplied by 100 to change it to a percentage which makes it = 85%

ANNEXURE 1 (E)

Training hours per person.

$$\frac{\text{Total training hours from January}}{\text{No of cell employees.}} \times \frac{12}{\text{No of months}}$$

EXPLANATION :

IT SHOWS IF THE NUMBER OF TRAINING HOURS CONDUCTED PER EMPLOYEE PER MONTH IS ON TARGET TO ACHIEVE THE 40 hr PER EMPLOYEE PER YEAR TARGET.

Minimum Training Hours Requirement Per Employee Per Year For Level 1 Certification = 40.

This Relates To 3.3 hrs Per Employee Per Month.
(40 hrs divided by 12 months)

Therefore If There Are 12 People In The EI Team Then The Team Would Require 40hrs Training To Be Conducted Per Month.
(3.3 hrs multiplied by 12 people)

Taking This Size Of Cell And It Is The Month Of May Then The Calculation Would Read As Follows.

Total Training Hours Conducted To Date Would Be
40 hrs Per Month x 5 (As May Is The 5th Month) = 200 hrs

$$\frac{\text{(Training hrs to Date) } 200}{\text{(Team Members) } 12} \times \frac{12}{5} \frac{\text{(Months Per Year)}}{\text{(Month)}}$$

$$200 \text{ divided by } 12 = 16.66 \times 2.4 = 12 \text{ divided by } 5$$

This Then Equals 40 Which Says If The Cell Continues To Conduct 40 hrs Training Per Month Then It Will Achieve The Goal Of 40 hrs Training Per Team Member Per Year.

Total Man Hours Worked

$[(n/s - \text{holidays}) \times 10.513 \text{ hrs} \times \text{No of operators}] + ((d/s - \text{holidays}) \times 8.3 \text{ hrs} \times \text{No of operators.})) + \text{overtime.}$

EXPLANATION : THE TOTAL NUMBER OF WORKING HOURS FOR THE MONTH MULTIPLIED BY THE NUMBER OF PEOPLE WORKING IN THE CELL.

If we take the case of a 4 week month with 1 day holiday the days would be as follows.

Day shift :

4 weeks x 5 working days per week = 20 days minus 1 day holiday = 19 working days.

Night shift :

4 weeks x 4 working days per week = 16 days minus 1 day holiday = 15 working days

The working hours for d/s would then be : 19 working days x 8.3 hrs = 157.7 hrs..

The working hours for n/s would then be : 15 working days x 10.513 hrs = 157.7 hrs.

If this cell has 12 employees per shift then the total man hours worked by d/s would be :
157.7 hrs x 12 employees = 1892.4 hrs.

Total man hours worked by n/s would be : 157.7 hrs x 12 employees = 1892.4 hrs.

Total man hours worked by the cell this month would be :

1892.4 hrs day shift + 1892.4 hrs night shift = 3784.8 hrs.

Total amount of overtime hours worked multiplied by the number of employees working the overtime would then be added to the above.

ANNEXURE 1 (G)

Labour as % of cost of production.

$$\frac{\text{Total man hours worked} \times \text{R18}}{\text{Average material cost} \times \text{throughput for the month}} \times 100$$

EXPLANATION : THE COST (AS A PERCENTAGE) OF LABOUR TO BUILD ONE PIECE OF THROUGHPUT.

Total man hours worked :

This will be the total hours worked by the cell for the month multiplied by the number of people working in the cell.

Average material cost :

Assembly parts, welding wire, gas, water, oils, packaging etc.

Throughput for the month :

The number of good units produced through the cell for that month.

R18 :

Average operating cost of one operator.

Therefore if we worked a 20 day month in a cell of 12 people producing a component with a material cost of R 249.70 and a throughput of 20200 units for the month the calculation would be as follows.

Total hours worked	38036.13 x 18	Labour cost	x	100
material cost	249,70 x 20200	throughput		
	68126.4		x	100
	5043940			
	0.0135		x	100 ,= 1.35%

So labour in this case would be 1.35% of the cost of production.

ANNEXURE 1 (H)

Avoidable scrap as a % of COP.

$$\frac{\text{Scrap value in Rands}}{\text{Average material cost x throughput for the month}} \times 100$$

EXPLANATION : HOW MUCH (AS % IN RANDS) SCRAP DID THE CELL MAKE TO PRODUCE THE THROUGHPUT FOR THIS MONTH.

If the cell has produced R36180 of scrap for the month and it has produced 18338 units for the month with a material cost of R249.70 per unit then the calculation would be as follows.

$$\begin{array}{l} \text{(scrap value)} \quad 36180 \quad \times \quad 100 \quad \text{(for percentage)} \\ \text{(mat cost)} \quad 249.7 \quad \times \quad 18338 \quad \text{(throughput)} \end{array}$$

$$249.7 \times 36180 = 4578998.6 \quad \text{(mat cost x throughput)}$$

$$36180 \times 100 \text{ divided by } 4578998.6 = 0.8\%$$

So in this case the cell would be running at a scrap rate of 0.8%

ANNEXURE 1 (I)

Average change over time.

$$\frac{\text{Total time lost due to change overs.}}{\text{No of change overs.}}$$

EXPLANATION :

This is the total production time lost due to change overs divided by number of change overs performed by the cell.

Therefore if we have a cell which has lost 120 minutes due to 10 change overs the calculation would be as follows.

$$\frac{\text{(time lost) } 120}{\text{(number of change overs) } 10}$$

$$120 \text{ divided by } 10 = 12$$

So the average change over time in this case would be 12 minutes.

ANNEXURE 1 (J)

% of machines capable

$$\frac{\text{Number of machines passed capability study.}}{\text{Number of machines studied.}} \times 100$$

EXPLANATION: THIS WILL TELL YOU IF THE
NUMBER OF MACHINES PASSED THE STUDY MEETS
THE REQUIRED TARGET OF 85%.

Example:

If there are 10 machines in a cell and 9 have passed the study then the calculation will be as follows.

$$\frac{(\text{machines passed}) \cdot 9}{(\text{machines studied}) \cdot 10} \times 100 \text{ (percentage)}$$

Therefore $9 \times 100 = 900$.

Divided by 10 = 90.

This has been calculated as a percentage so 90% of the machines in the cell have passed the study.

ANNEXURE 1 (K)

% Of machines studied for capability.

$$\frac{\text{Number of studied for capability.}}{\text{Number of machines requiring studies.}} \times 100$$

EXPLANATION :

(CAPABILITY.) The ability of the machine to accurately repeat its required function during a set number of cycles.

THIS WILL SHOW IF THE NUMBER OF MACHINES STUDIED MEETS THE REQUIRED TARGET OF 100%.

Example.

If there are 10 machines in a cell and 9 have been studied then the calculation would be as follows.

$$\frac{(\text{machines studied})}{(\text{machines in cell})} \times 100 = \frac{9}{10} \times 100$$

Therefore $9 \times 100 = 900$

Divided by $10 = 90$

This has been calculated as a percentage so 90% of the machines in the cell have been studied.

ANNEXURE 1 (L)

PPM Defective.

$$\frac{\text{Rejects for the month} \times 1,000,000.}{\text{Throughput}}$$

EXPLANATION :

It gives the number of rejects the cell will produce by the time it has produced 1 million units if the reject rate stays at these levels.

If the cell sends one reject component to its customer during the month and the cell's throughput for the month was 40,000 units then the calculation would be as follows.

$$\frac{(\text{rejects}) \quad 1 \times 1,000,000.}{(\text{throughput}) \quad 40,000}$$

$$1,000,000 \text{ divided by } 40,000 = 25$$

So 1 reject in 40,000 relates to the World Class target of 25

ANNEXURE 1 (M)

Actual % downtime.

$$\frac{\text{Total hours unplanned downtime}}{\text{Planned runtime}} \times 100$$

EXPLANATION:

This will show (as a percentage) how much of the total planned run time was lost due to unplanned downtime.

Definitions :

Unplanned downtime : Any downtime which has not been planned ie machine breakdowns, material shortages, absenteeism etc.

Planned run time :

Total time available for production minus any planned downtime.

So if we have a cell which has 120 minutes downtime during a period of 1200 minutes of run time then the calculation would be as follows.

$$\frac{(\text{unplanned downtime})}{(\text{planned run time})} = \frac{120}{1200} \times 100 \text{ (percentage)}$$

120 multiplied by 100 = 12000

Calculation will then be :

$$\frac{12000}{1200}$$

12000 divided by 1200 = 10

So the unplanned down time would be 10% of the planned run time.

ANNEXURE 1 (N)

BOS Calculations

Gross Suggestions per employee per annum :	$\frac{\text{Total Suggestions made since Jan}}{\text{No. of Employees}} \times \frac{12}{\text{No. of Months}}$	
Valid Suggestions per employee per annum :	$\frac{\text{Valid Suggestions made since Jan}}{\text{No. of Employees}} \times \frac{12}{\text{No. of Months}}$	
% of Valid Suggestions implemented :	$\frac{\text{Valid Suggestions implemented since Jan}}{\text{No. of Employees}} \times \frac{12}{\text{No. of Months}} \times 100$	
	$\frac{\text{Valid Suggestions made since Jan}}{\text{No. of Employees}} \times \frac{12}{\text{No. of Months}}$	
% of Employees on EI Team :	$\frac{\text{No. of Employees on EI Team}}{\text{No. of Employees}} \times 100$	
% of Employees Cross trained :	$\frac{\text{No. of Employees Cross trained}}{\text{No. of Employees}} \times 100$	
Training hours per person :	$\frac{\text{Total training hrs from Jan}}{\text{No. of Employees}} \times \frac{12}{\text{No. of Months}}$	
Total hours worked :	$[(\text{NS-Holidays}) \times 10.375 \times \text{No. of Ops.}] + [(\text{DS-Holidays}) \times 8.3 \times \text{No. of Ops.}] + \text{Overtime}$	
Labour as a % of COP :	$\frac{\text{Total hrs worked} \times \text{R}18.00}{\text{Avg. Material Cost} \times \text{Throughput for that Month}} \times 100$	
Avoidable Scrap as a % of COP :	$\frac{\text{Scrap value in R}}{\text{Avg. Material Cost} \times \text{Throughput for that Month}} \times 100$	
Average C/Over Time :	$\frac{\text{Total Time Lost due to C/Over}}{\text{No. of C/Overs}}$	
Supplier days inventory :	$\frac{\text{Amount of product}}{\text{Throughput per day (Projected)}}$	
WIP hours :	$\frac{\text{Amount of product in process}}{\text{Throughput per day (Projected)} / 16.6}$	
% Studied (Process Capability) :	$\frac{\text{No. of Cpk Characteristics Studied}}{\text{Total No. of Cpk Characteristics}}$	
% Cpk above 1.67 :	$\frac{\text{No. of Cpk above 1.67}}{\text{Total No. of Cpk Characteristics}}$	
PPM Defective :	$\frac{1 \text{ mil.} \times \text{Month Returns (Complete Units)}}{\text{Throughput for that Month}}$	
Actual % Downtime :	$\frac{\text{Actual Hours Down (Cell not Producing)}}{\text{Planned Runtime} \times \text{Var}}$	
Var :	No. of Outputs	
TAKT Time (minutes) :	$[(\text{NS-Holidays}) \times 9.975 \text{ hours}] + [(\text{DS-Holidays}) \times 7.9] \times 60$	

ANNEXURE 1 (N) cont.

BOS Calculations

Planned Downtime (Special Allowances) : $((NS-Holidays) \times 32.5 \text{ hours}) - ((DS-Holidays) \times 31)) \times 60$

Planned Run Time : TAKT Time - Planned Downtime

Net Operating Time : Planned Run Time - Downtime (Cell stops producing)

Operation Uptime : $\frac{\text{Net Operating Uptime}}{\text{Planned Run Time}}$

Processed Amount : Actual Throughput + Complete Units Scrap

Target Cycle Time : $\frac{\text{Planned Run Time}}{\text{Average Customer Demand per day} \times (DS - Holidays)}$

Speed Ratio : $\frac{\text{Target Cycle Time} \times \text{Processed Amount}}{\text{Net Operating Time}} \times 100$

Total Rejects : Complete Units Scrap per Month + Month Returns

Quality % : $\frac{\text{Processed Amount} - \text{Total Rejects}}{\text{Processed Amount}}$

O.E.E. : Quality % x Speed Ratio x Operation Uptime

TAKT Units : Average Customer demand per day x No of Day Shifts

Standard Hours x Standard Manning : $((NS-Holidays) \times 10.375 \times \text{No. of Ops.}) + ((DS-Holidays) \times 8.3 \times \text{No. of Ops.})$

Actual Hours Worked : (Standard Hours x Standard Manning) - Total hours lost due to Absenteeism + Total Overtime

Average Customer Demand : Highest Production Target per hour * 14.93

ANNEXURE 2 (A)

Unplanned down Time.

After carefully studying my BOS chart I came to the following conclusion:

On the improvement tracking graph it is clearly indicated that there was an impressionable reduction in down time.....12.40% to be exact, which in production terms is equal to approximately 10 hours which intern also means if 1 hour of production is equals to 180 units build than 10 hours would than mean a total to the amount of 1800 units build theoretically.

Here are some figures observed:

- a) b/downs 540 to 160
- b) c / over 1215 to 510
- c) material 1236 to 607

This figures above is a clear indication in what areas the reduction is visible.

I also deter mind that there was a serious drop in the yearly line graph from the month of March till the month of August.

The improvements are as follows:

- a) Keep filling in OPM's in the morning.
- b) The exact timing of changeovers with a proper clock.
- c) Material to be ready in beginning of each shift or any part for that mater.
- d) Quick responds from maintenance on machine break downs

ONE TEAM ONE GOAL

ANNEXURE 2 (B)

WEEKLY ENVIRONMENTAL INSPECTION CHECKLIST (5S CHECK LIST)

Inspector's Name		Date	Week No.	Cell
ITEM		SCORE	COMMENTS	CORRECTIVE ACTION
CLEANLINESS	1. Are work areas clean? (No waste paper, cigarette ends, etc. on floor)	1 2 3 4 5		
	2. Is equipment kept clean? (No accumulated grease, oil etc.)	1 2 3 4 5		
	3. Are cleaning materials available? (Brush, Shovel, Fluids, Wipes, Oils etc.)	1 2 3 4 5		
	4. Is there a comprehensive cleaning schedule? (Men, Machines, Days, Times etc)	1 2 3 4 5		
ORGANISATION	5. Have all unnecessary items been removed ? (Loose gloves, Glasses, Parts etc.)	1 2 3 4 5		
	6. Is all necessary work documentation available? (K50, OEE, Labels, etc.)	1 2 3 4 5		
	7. Are walkways and work areas clearly identified? (Colour Coding of Floors)	1 2 3 4 5		
	8. Are all waste containers identified? (Tickets, Labels, etc.)	1 2 3 4 5		
NEATNESS	9. Is all work area documentation in good order? (K50, OEE, etc.)	1 2 3 4 5		
	10. Is Environmental board neat? (Correctly positioned, Readable, Clean, etc.)	1 2 3 4 5		
	11. Are rubbish bins emptied regularly? (Scrap, Cardboard, Rubbish, etc.)	1 2 3 4 5		
	12. Are visual aids in good condition? (Correctly positioned, Readable, Clean, etc.)	1 2 3 4 5		
DISCIPLINE	13. Is the cell documentation completed correctly? (K50, OEE, Uptime, etc.)	1 2 3 4 5		
	14. Are personal items removed from the work area? (Newspapers, Coats, etc.)	1 2 3 4 5		
	15. Are safety rules observed? (Safety Glasses, Gloves, Overalls, etc.)	1 2 3 4 5		
	16. Are ATPM check sheets & board up to date? (Are jobs requiring action identified on board)	1 2 3 4 5		
ORDERLINESS	17. Are painted border lines clean and unbroken? (Are lines adequately painted, etc.)	1 2 3 4 5		
	18. Is everything in its specified place? (Material, Tools, Jigs, etc.)	1 2 3 4 5		
	19. Are reject parts identified with correct details? (Pink tickets on parts to be reworked etc.)	1 2 3 4 5		
	20. Is Environmental board up to date? (Training matrix, Calendar, etc.)	1 2 3 4 5		

TOTAL SCORE (maximum 100)

ny work area scoring 55 points or less (<55%) MUST immediately submit an improvement plan to the Production Manager

ANNEXURE 2 (C)

CROSS TRAINING FOR OPERATORS EVALUATION

NAME: _____

DATE: _____

EQUIPMENT: _____

TIME: 30 MINS

Number	TASK	Competent	Not Yet Competent
1	Identify machine parts		
2	Apply safety precautions		
3	Operator Preventative Maintenance		
4	Operate machine - produce 1st off		
5	Set-up machine within Change Over Limit		
6	Identify Machine parts		
7	Do quality checks as per quality check list		
8	Work with Statistical Process Control		
9	Read and Evaluate Engineering Drawings		
10	Use of Vernier		
11	Use of Micrometer		
12	Use of clock gauge		
13	Identify tool list		

OPERATOR: _____

TEAM LEADER: _____

FOREMAN: _____

ANNEXURE 2 (D)

REMEMBER TO CHANGE THE MONTH IN CELL A2 TO THE CURRENT MONTH AFTER THE FILE HAVE BEEN SAVED TO THE CURRENT MONTH

AUGUST'99 Chart Information

Equipment BREAKDOWNS

1 Tooling	0	Overtime	0 hrs	No People Absent	
2 Quality	0	Absenteeism	0 hrs	Day	Night
3 Technical	0	Training	284.5 hrs	0	0
4 Coolant/Oil	0	Throughput	26765 units		
5 Pneumatics	0			Sug	
6 Hydraulics	0	PPM	Quantity	Training hours	
7 Mechanical	0	1 GAS PRESSURE H / L	0	PPM	
8 Electrical	0	2 SPIN LEAKERS	0	Scrap	
TOTAL	739	3 GAS LEAKERS	5		
		4 OTHER	12		
CHANGE OVER	69				
Set-up	450	SCRAP	Quantity		
First Off	0	1 GAS LEAKERS	R 0		
Other	0	2 HANDLING DAMAGED	R 0		
TOTAL	450	3 WELD DAMAGED	R 0		
		4 DEFECTIVE RESISTANCE	R 0		
MATERIAL		5 INCORRECT ASSEMBLY	R 0		
Not available	0	6 MACHINE DAMAGED	R 0		
Material	0	7 OTHER	R 0		
Quality	0				
TOTAL	1591	COMPLETE UNITS SCRAP	0		
OTHER	0				
		SUGGESTION:	Raised	Valid	Implemented
OPERATOR			80	80	80
No Operator	0				
Absenteeism	0	EMPLOYEES			
Operator Error	0	No of Employees	7		
	5.5	No. Day Shift	7		
		No. Night Shift	0		
		El Team	7		
		No Xtrained	7		
PLANNED DOWNTIME	0 Minutes				
	158 Hrs				
TOTAL DAYS WORKED	19 Day Shift				
	15 Night Shift				
	0 Holidays				

REMEMBER TO CHANGE THE YELLOW BLOCK G41 IF A 5 WEEK MONTH or 4 WEEK MONTH

COST CODE : 273

Cpk Characteristics

Gas Lift

GAS FILL W/C	1.54	No of Cpk Characteristics studied	11
N/A	10	No. of Cpk above 1.57	11
N/A	10	Total No. of Cpk Characteristics (constant)	13
N/A	10		

Projected Constant 1200
Average material cost R 2.20

FACILITATED BY
MANAGER
FOREMAN

Supplier Days inventory 45 days
WIP Hours 24 hrs

ANNEXURE 2 (E)

Overall Equipment Effectiveness (O.E.E.)

CELL: GAS LIFT
ASSY. CELL

DATE: SEPT 1999

AVAILABILITY

Total Available Time to TAKT : 17983.5 minutes
 Total Available Working hours - Tea Breaks (18 x 12min)

Planned Downtime (Special Allowances) : 1076.5 minutes
 Cleaning(135)+OPM(50)+El(60)=265 :

Planned Run Time : 16907 minutes

Lost Time / Downtime : 2785.5 minutes

1. Equipment Breakdowns	739	mins.	4.4%	of Planned Run Time
2. Equipment Changeover	450	mins.	2.7%	of Planned Run Time
Total Equipment Lost Time / Downtime	1189	mins.	7.0%	of Equip. Downtime
1. Non-Equipment Operator	5.5	mins.	0.0%	of Planned Run Time
2. Non-Equipment Material	1591	mins.	9.4%	of Planned Run Time
3. Non-Equipment Other	0	mins.	0.0%	of Planned Run Time
Total Non-Equipment Lost Time / Downtime	1596.5	mins.	9.4%	of Non-Equip. Downtime

Net Operating Time : 14121.5 minutes

Operation Uptime : 63.5%

PERFORMANCE

Processed Amount : 28785 parts
 Good & Bad

Target Cycle Time : 0.74 min/part

Speed Ratio : 151.2%

QUALITY

Total Rejects or off Quality : 17 parts
 Complete Units Only

Quality Percent : 99.9%

O.E.E.

Overall Equipment Effectiveness : 128.2%

ANNEXURE 2 (F)

CELL : GAS LIFT

MONTH : SEPT

PRODUCTIVITY INDEX

$$PI = \frac{\text{Actual Units}}{\text{TAKT Units}} \times \frac{\text{Standard hours} \times \text{Standard Manning}}{\text{Actual Man Hours}}$$

$$PI = \frac{28785}{22800.0} \times \frac{1103.90}{1129.90}$$

$$PI = \boxed{1.2334}$$

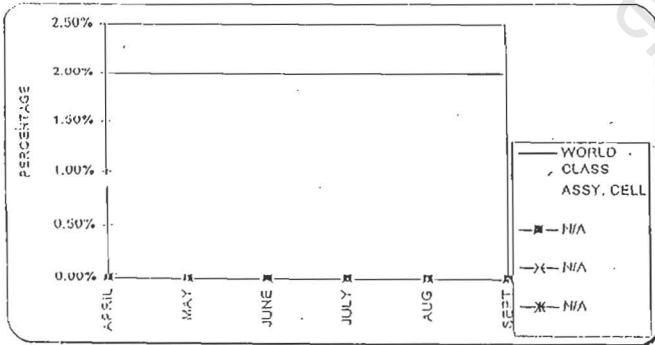
WORLD

CLASS

CHARTS

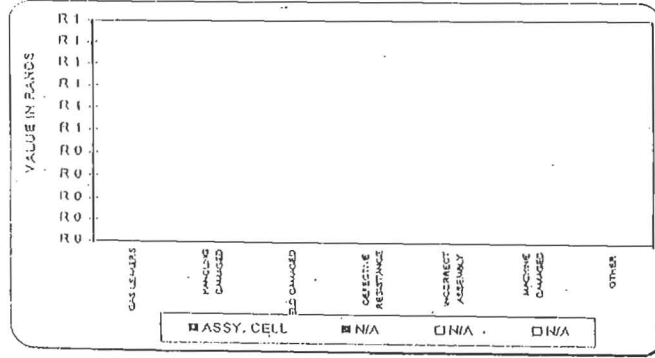
WC CHARTS

SHEET 5	CELL: <u>GAS LIFT</u>	FACILITATOR: _____
MEASURABLE: <u>QUALITY</u>	DATE: <u>SEPT</u>	RESP. PERSON: _____
QUANTIFIER: <u>SCRAP AS % OF COP</u>		



IMPROVEMENT ACTIVITIES				
REF	DESCRIPTION	RESP	STATUS	END DATE

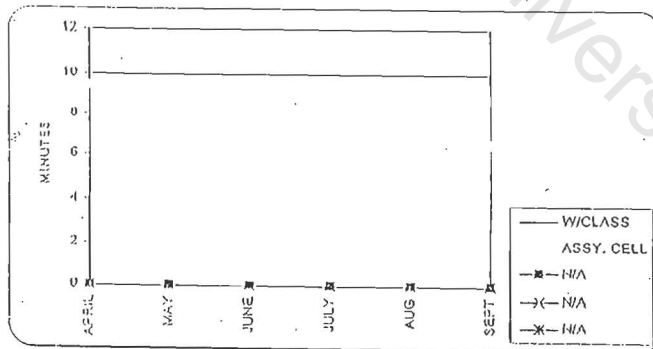
REASONS FOR SCRAP FOR THE LAST MONTH



IMPROVEMENT TRACKING (in Rands)					
REF	DESCRIPTION	JUNE	JULY	AUG	SEPT
1	GAS LEAKERS	R 37	R 16	R 101	R 0
2	HANDLING DAMAGED	R 0	R 0	R 0	R 0
3	WELD DAMAGED	R 0	R 0	R 0	R 0
4	DEFECTIVE RESISTANCE	R 41	R 0	R 0	R 0
5	INCORRECT ASSEMBLY	R 0	R 0	R 0	R 0
6	MACHINE DAMAGED	R 0	R 53	R 26	R 0
7	OTHER	R 101	R 56	R 32	R 0

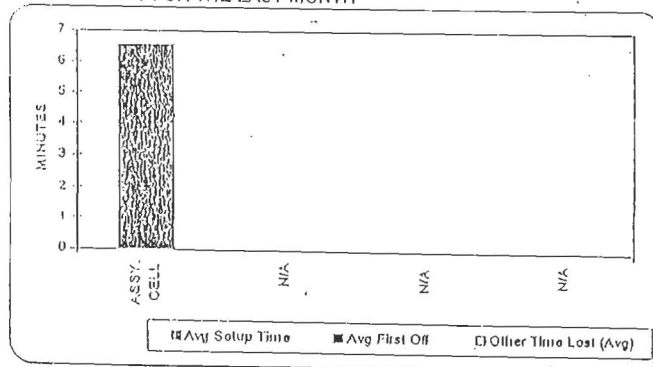
WC CHARTS

SHEET 4	CELL: <u>GAS LIFT</u>	FACILITATOR: _____
MEASURABLE: <u>CHANGEOVER TIME</u>	DATE: <u>SEPT</u>	RESP. PERSON: _____



IMPROVEMENT ACTIVITIES				
REF	DESCRIPTION	RESP	STATUS	END DATE

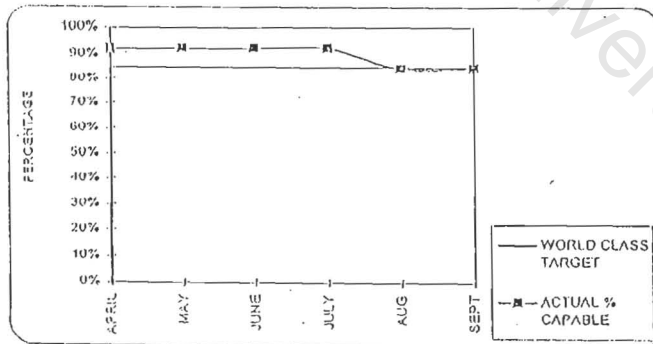
ACTUAL TIMES FOR THE LAST MONTH



IMPROVEMENT TRACKING (in Minutes)					
REF	DESCRIPTION	JUNE	JULY	AUG	SEPT
	Average C/Over Time				
1	ASSY. CELL	8	6	5	7
2	N/A	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
3	N/A	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
4	N/A	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

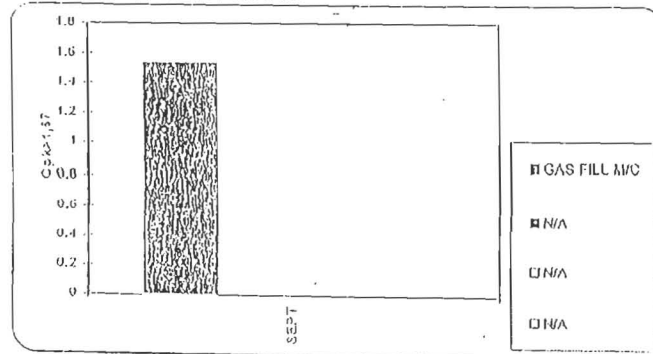
WC CHARTS

SHEET 3	CELL: <u>GAS LIFT</u>	FACILITATOR: _____
MEASURABLE: <u>QUALITY</u>	DATE: <u>SEPT</u>	RESP. PERSON: _____
QUANTIFIER: <u>PROCESS CAPABILITY</u>		



IMPROVEMENT ACTIVITIES				
REF	DESCRIPTION	RESP	STATUS	END DATE

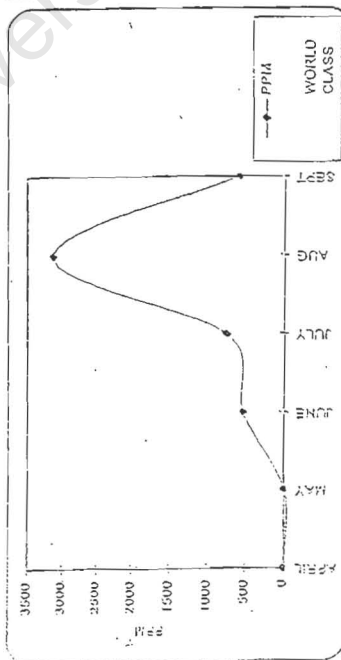
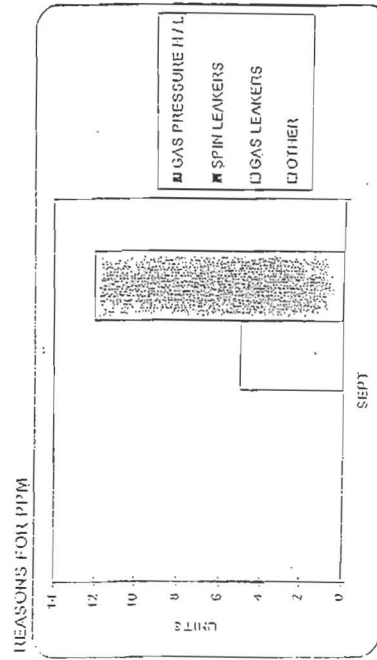
PROCESS CAPABILITY STATUS



IMPROVEMENT TRACKING (Cpk)					
REF	DESCRIPTION	JUNE	JULY	AUG	SEPT
1	GAS FILL M/C	1.54	1.54	1.54	1.54
2	N/A	0	0	0	0
3	N/A	0	0	0	0
4	N/A	0	0	0	0

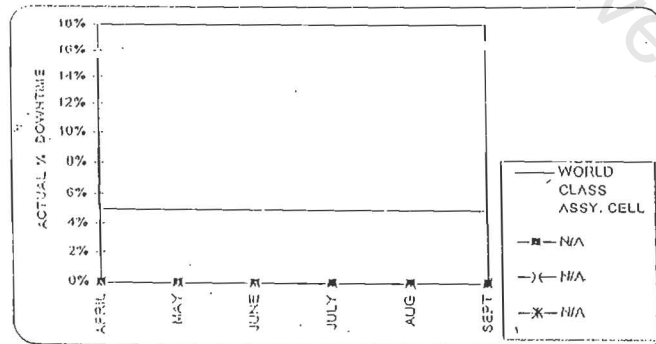
WC CHARTS

SHEET 2	CELL: <u>GAS LIFT</u>	FACILITATOR:
MEASURABLE: <u>PPM</u>	DATE: <u>SEPT</u>	RESP. PERSON:

[illegible][illegible]

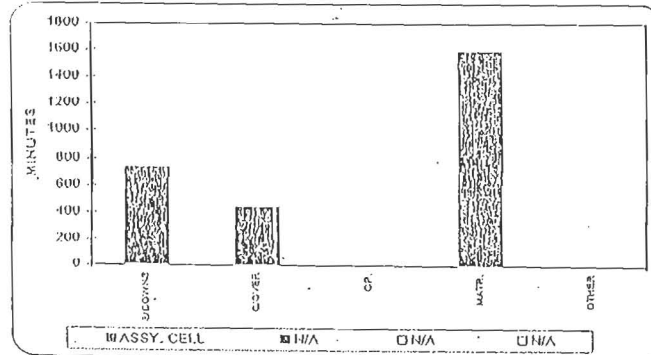
WC CHARTS

SHEET 1	CELL: <u>GAS LIFT</u>	FACILITATOR: _____
MEASURABLE: <u>UNPLANNED DOWN TIME</u>	DATE: <u>SEPT</u>	RESP. PERSON: _____



IMPROVEMENT ACTIVITIES				
REF	DESCRIPTION	RESP	STATUS	END DATE

REASONS FOR DOWN TIME OVER THE LAST MONTH



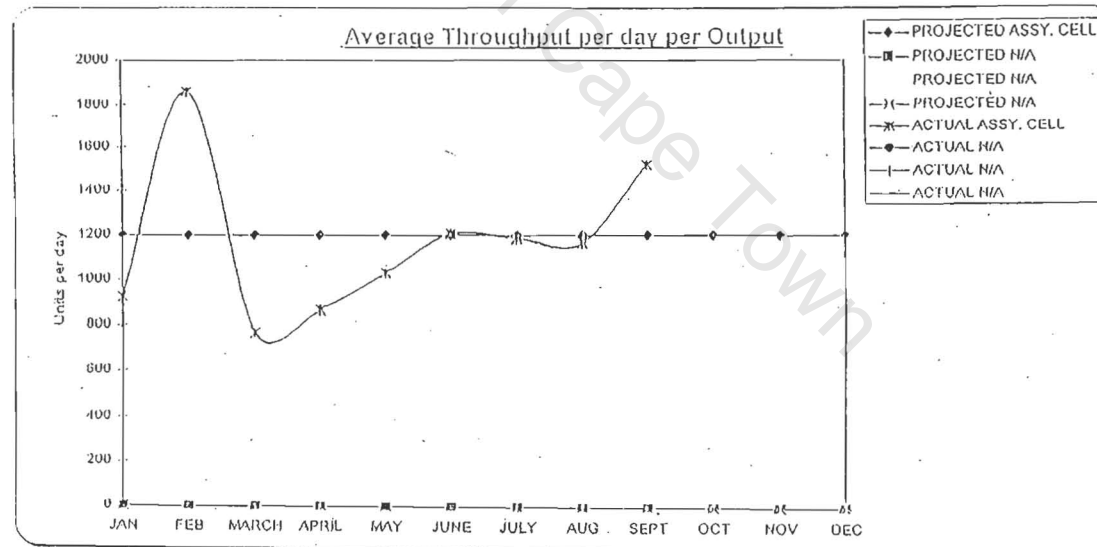
IMPROVEMENT TRACKING (in Minutes)					
REF	DESCRIPTION	JUNE	JULY	AUG	SEPT
1	B/DOWNS	560	233	575	739
2	C/OVER	355	355	214	450
3	OP.	0	0	400	5.5
4	MATR.	0	0	0	1591
5	OTHER	40	0	0	0

History Summary

CELL : GAS LIFT

DATE: SEPT 1999

	DATA @ RE-CERT. OCT '99	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
Gross Suggestions per Employee per annum	15	15	15	15	19	15	15	15	15	15			
Valid Suggestions per Employee per annum	15	12	15	15	19	15	15	15	15	15			
% of Valid Suggestions Implemented	100%	100%	100%	100%	100%	100%	87%	97%	100%	100%			
% of Cell Employees on EI Team	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%			
Training Hours per Person - YTD (annualised)	83.00	41.14	41.14	42.57	27.00	21.60	76.00	65.08	63.11	50.10			
% of Cell Cross-Trained - [(Ho. of Op.) %]	(7) 100%	(7) 100%	(7) 100%	(7) 100%	(7) 100%	(7) 100%	(7) 100%	(7) 100%	(7) 100%	(7) 100%			
Labor as a % of COP	9.63%	12.31%	8.20%	16.22%	13.40%	11.20%	9.62%	9.79%	9.53%	7.69%			
Avoidable Scrap as a % of COP	0.07%	0.00%	0.15%	0.34%	0.82%	0.14%	0.09%	0.09%	0.07%	0.00%			
Changeover Time (Average)	5 min	9.05 min	46.71 min	14.03 min	9.40 min	7.503 min	7.553 min	8.155 min	5.093 min	8.522 min			
Supplier Days Inventory	4 days	4 days	4 days	4 days	4 days	4 days	4 days	4 days	4 days	4 days			
WIP Hours	4.0 hours	4.0 hours	4.0 hours	4.0 hours	4.0 hours	4.0 hours	4.0 hours	4.0 hours	4.0 hours	4.0 hours			
Equipment Capability % Studied	85%	100%	100%	100%	100%	100%	100%	100%	100%	85%			
% Cpk > 1.67	85%	92%	92%	92%	92%	92%	92%	92%	92%	85%			
PPM Defective	3145	2900	1293	801	0	0	530	759	3145	591			
Actual % Downtime (25% Reduction)	6.60%	10.61%	20.74%	10.09%	15.70%	13.14%	5.55%	3.39%	0.68%	10.40%			
Avg. Throughput p/day ASSY, CELL		924	1054	760	833	1020	1209	1187	1193	1515			
Avg. Throughput p/day N/A		0	0	0	0	0	0	0	0	0			
Avg. Throughput p/day N/A		0	0	0	0	0	0	0	0	0			
Avg. Throughput p/day N/A		0	0	0	0	0	0	0	0	0			



1999 ATQPS CERTIFIED CELLS MEASURES - WORLD CLASS FORM

CELL: GAS LIFT

DATE: SEPT 1999

MEASURES	WORLD CLASS TARGET	DATA @ RE-CERT. OCT '99	APRIL	MAY	JUNE	JULY	AUG	SEPT	6 MTH AVG. OR YTD	ATVW A OR % VARIANCE ON WC TARGET	% CHANGE ON DATA @ CERT.
Gross Suggestions per Employee per annum	15	15	19	15	15	15	15	15	15	A	1.6%
Valid Suggestions per Employee per annum		15	19	15	15	15	15	15	15		
% of Valid Suggestions Implemented	85%	100%	100%	100%	97%	97%	100%	100%	97%	A	-2.7%
% of Cell Employees on EI Team	100%	100%	100%	100%	100%	100%	100%	100%	100%	A	0.00%
Training Hours per Person - YTD (annualised)	48	63.00	27.00	21.60	70.86	65.00	63.11	56.10	56.10	A	-11.0%
% of Cell Cross-Trained - [(No. of Op.) %]	100%	(7) 100%	(7) 100%	(7) 100%	(7) 100%	(7) 100%	(7) 100%	(7) 100%	(7) 100%	A	0.000%
Labor as a % of COP	10%	9.90%	13.48%	11.30%	8.62%	9.79%	9.06%	7.60%	10.30%	-3.0%	-3.4%
Avoidable Scrap as a % of COP	2%	0.07%	0.02%	0.14%	0.00%	0.00%	0.07%	0.00%	0.21%	A	-200.6%
Changeover Time (Average)	10 minutes	5 min's	9 min's	8 min's	8 min's	8 min's	5 min's	7 min's	7.11 min's	A	-12.2%
Supplier Days Inventory	4 days	4 days	4 days	4 days	4 days	4 days	4 days	4 days	4 days	A	0.00%
WIP Hours	4 hours	4.0 hours	4.0 hours	4.0 hours	4.0 hours	4.0 hours	4.0 hours	4.0 hours	4.0 hours	A	0.00%
Equipment Capability % Studied	100%	85%	100%	100%	100%	100%	85%	85%	95%		-0.6%
% Cpk > 1.67	85%	85%	92%	92%	92%	92%	85%	85%	90%	A	-0.4%
PPM Defective	25	3145	0	0	530	759	3145	591	639	-3264.6%	73.33%
Actual % Downtime (25% Reduction)	5%	7%	15.76%	13.14%	5.55%	3.39%	8.68%	16.46%	10.17%	-102.9%	-62.2%

Require an A for

Cross Training

& within 10% of WVC Target in all other Measures

PPM

Scrap

Equipment Capability

ANNEXURE 3 (G)

1999 ATQPS CERTIFIED CELLS MEASURES - RECERTIFICATION FORM

CELL: GAS LIFT

DATE: SEPT 1999

MEASURES	WORLD CLASS TARGET	DATA @ RE-CERT. OCT '99	JULY	AUG	SEPT	3 MTH AVG. OR YTD	ARVIN A OR % IMPROVED ON DATA @ CERT.
Gross Suggestions per Employee per annum	15	15	15	15	15	15	A
Valid Suggestions per Employee per annum		15	15	15	15	15	
% of Valid Suggestions Implemented	85%	100%	97%	100%	100%	100%	A
% of Cell Employees on EI Team	100%	100%	100%	100%	100%	100%	A
Training Hours per Person - YTD (annualised)	40	63.00	65.08	63.11	56.10	56.10	A
% of Cell Cross-Trained - [(No. of Op.) %]	100%	(7) 100%	(7) 100%	(7) 100%	(7) 100%	(7) 100%	A
Labor as a % of COP	10%	9.96%	9.79%	9.96%	7.68%	9.14%	A
Avoidable Scrap as a % of COP	2%	0.07%	0.06%	0.07%	0.00%	0.04%	A
Changeover Time (Average)	10 minutes	5 min's	6 min's	5 min's	7 min's	6.02 min's	A
Supplier Days Inventory	4 days	4 days	4 days	4 days	4 days	4 days	A
WIP Hours	4 hours	4.0 hours	4.0 hours	4.0 hours	4.0 hours	4.0 hours	A
Equipment Capability % Studied	100%	85%	100%	85%	85%	90%	
% Cpk > 1.67	85%	85%	92%	85%	85%	87%	A
PPM Defective	25	3145	759	3145	591	1498	52.37%
Actual % Downtime (25% Reduction)	5%	7%	3.39%	6.68%	16.48%	8.85%	-32.6%

Require an A or a minimum of 5% improvement on 10 of the 13 Measures

MEETING / CELL

DOCUMENTS

ANNEXURE 4 (A)

ATQPS CERTIFICATION CHECK LIST

Cell :

1. TRAINING

Cross training matrix
Individual training records including
number of hours training per month.
Grading system

SCORE					COMMENTS
1	2	3	4	5	

2. CHANGE-OVER

Quick change tooling on all m/c's
Set up instructions / procedures at all m/c's
Set up time tracking and trends - include
a plan of action to reduce set up time
Identification of all tools
Tooling close to or at machine
Green / Red rack for tooling
Tool chart to indicate which tool to
use per job
Record practice of quick set - ups

1	2	3	4	5	COMMENTS

3. LAYOUT

Cellular manufacturing layout
One piece flow between operation
Flow distance in cell reduced - close
together

1	2	3	4	5	COMMENTS

4. WIP / RAW MATERIALS

Kanban racks for max. of 5 day for locals
WIP demarcation for max. 4 hours
No WIP or raw material in non -
demarcated areas
All parts identified with bar-codes on
kanban racks
All parts in proper containers
Andon lights for material
Kanban rack instructions - Kanban Vs
Skids

1	2	3	4	5	COMMENTS

ANNEXURE 4 (A) cont.

5. HOUSEKEEPING

- Place for everything and everything in it's place
- Chart to indicate responsibility for green area / housekeeping
- Mops / brooms / water buckets / stand in cell and identified with a sign
- Dust bin in cell
- Racks for drawings
- Urn and urn cupboard
- Overhead signs
- First Aid box

SCORE					COMMENTS
1	2	3	4	5	

6. PROCESS

- First off signs with holder at all machines
- Safety critical signs at safety critical processes
- Error proofing devices with signs
- Operator procedures at all machines
- SPC chart
- Boundary samples
- Process capability chart and improvement plan for equipment whose CPK is less than 1.67

1	2	3	4	5	COMMENTS

7. CONTROL BOARDS / MEASURES

- Unplanned downtime per machine
- Hourly production performance board
- Production planning board
- Production planning cards rack
- Lead time graphically displayed
- PPM graph
- Scrap graph / chart - (causes identified, Pareto chart & action plan to reduce largest)
- Average values for components and completed units displayed
- Preventative maintenance instructions and check list
- Order fill / availability

1	2	3	4	5	COMMENTS

ANNEXURE 4 (A) cont.

7.CONT'D

Supplier performance
Customer feedback reports
Absenteeism records
Safety instructions and information
Quality procedures and instructions
Electronic counters for total production
and cycle time

SCORE					COMMENTS
1	2	3	4	5	

8.ATQPS

E.I. information displayed - Log and
track of all suggestions
BOS information and tracking
Certification measures for certified cells
ATQPS certification documents

1	2	3	4	5	COMMENTS

ANNEXURE 4 (B)

Daily Cell Performance Sheet

CELL Bushington DAY MON DATE 06-09-99

DAYSHIFT

NIGHTSHIFT

1. PLANNED DOWNTIME

15 min

15 min

Exp: team meetings, atpm, clean-up, machine available but not operating

UNPLANNED DOWNTIME

2. EQUIPMENT BREAKDOWN

— min

— min

Exp: from the time the machine stops until it is functional again

3. CHANGEOVER

1 min

2 min

HOW MANY

1

HOW MANY

2

Exp: from the last good piece to first good piece

4. MATERIAL (not available)

300 min

60 min

Exp: delay due to parts not available

Reasons Why:

Days	NO WORK FROM OFF DUST BIN CELL WAITING ON WORK FROM BUILD CELL.
Nights	Wks work from BUILD CELL'S.

5. OPERATOR

— min

— min

PARTS

6. PARTS PRODUCED

787

2200

Exp: total number of good pieces per shift

7. TOTAL SCRAP

—

—

Exp: all bad parts rejected - not reworked

8. MANNING LEVEL

3

3

Exp: number of people working in cell

9. OVERTIME WORKED

— Hours

— Hours

— People

— People

ANNEXURE 4 (C)

E.I. TEAM CHAMPIONS

PPM

SCRAP

DOWNTIME

CPK

CHANGEOVER

TRAINING

WIP

SUGGESTIONS

CELL: O.E. SPECKS

'Cell Stopper' Analysis

NB: Only one Cross per Line

*Operator Downtime only recorded if Cell stops producing

[illegible]

ANNEXURE 4 (D)

ANNEXURE 4 (E)

EMPLOYEE INVOLVEMENT MEETING RESPONSIBILITIES

- Manager
- Foreman / Supervisor
- Process Engineer
- Quality Engineer
- Maintenance
- Material Handler
- Facilitator
- Co-Facilitator
- Team Leader
- Scribe
- PPM Champion
- Downtime Champion
- Scrap Champion
- Changeover Champion
- Team Members:

ANNEXURE 4 (F)

EMPLOYEE INVOLVEMENT SUGGESTION SHEET

REFERENCE No. : 1839

E.I. TEAM :		DATE RAISED : 16.09.99																	
BEFORE IMPROVEMENTS (IDENTIFY IN DETAIL) NO TIME FOR WORLD CLASS MEASURE'S		AFTER IMPROVEMENTS NEED AT LEAST 60 MIN A WEEK																	
BENEFITS : GET WORLD CLASS MEASURE'S UP TO DATE																			
SUGGESTION IMPACT : <table style="width: 100%;"> <tr> <td>OPERATOR</td> <td>☐</td> <td>TEAMLEADER</td> <td>☐</td> </tr> <tr> <td>ENGINEERING</td> <td>☐</td> <td>QUALITY</td> <td>☐</td> </tr> <tr> <td>HEALTH & SAFETY</td> <td>☐</td> <td>SUPERVISOR</td> <td>☒</td> </tr> <tr> <td>MAINTENANCE</td> <td>☐</td> <td>ADMIN.</td> <td>☐</td> </tr> </table> OTHER (DETAILS) : AGREEMENT FROM ALL SHIFTS YES ☐				OPERATOR	☐	TEAMLEADER	☐	ENGINEERING	☐	QUALITY	☐	HEALTH & SAFETY	☐	SUPERVISOR	☒	MAINTENANCE	☐	ADMIN.	☐
OPERATOR	☐	TEAMLEADER	☐																
ENGINEERING	☐	QUALITY	☐																
HEALTH & SAFETY	☐	SUPERVISOR	☒																
MAINTENANCE	☐	ADMIN.	☐																
COMMENTS :																			
SUGGESTION APPROVED ☒		SUGGESTION DENIED ☒																	
COMMENTS : HAVE 60 MIN PER WEEK																			
PERSON RAISED & RESPONSIBLE SHERA		DATE OF IMPLEMENTATION TARGET DATE : ACTUAL DATE :																	

PINK COPY - E.I. TEAM

YELLOW COPY - SUPPORT

WHITE COPY - FACILITATOR

ANNEXURE 4 (G)

EMPLOYEE INVOLVEMENT SUGGESTION SHEET

REFERENCE No. : 1840

E.I. TEAM :		DATE RAISED : 17-09-99.									
BEFORE IMPROVEMENTS (IDENTIFY IN DETAIL) ONE HAS TO STRETCH HIS/HER HANDS TO BRING IN THE BASKETS NEARER		AFTER IMPROVEMENTS 1- 900 CM LONG HOOKS (CAN BE 11MM ROD OR 1/2" BIGGER, BENT AT THE END FOR HOOKING THE BASKETS.									
BENEFITS : ONE DOES NOT HAVE TO STRUGGLE (QUICK AND EASY IDEA TO USE. TIME SAVED.											
SUGGESTION IMPACT : <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">OPERATOR ☐</td> <td style="width: 50%;">TEAMLEADER ☐</td> </tr> <tr> <td>ENGINEERING ☐</td> <td>QUALITY ☐</td> </tr> <tr> <td>HEALTH & SAFETY ☐</td> <td>SUPERVISOR ☐</td> </tr> <tr> <td>MAINTENANCE ☐</td> <td>ADMIN. ☐</td> </tr> </table> OTHER (DETAILS) : AGREEMENT FROM ALL SHIFTS YES ☐				OPERATOR ☐	TEAMLEADER ☐	ENGINEERING ☐	QUALITY ☐	HEALTH & SAFETY ☐	SUPERVISOR ☐	MAINTENANCE ☐	ADMIN. ☐
OPERATOR ☐	TEAMLEADER ☐										
ENGINEERING ☐	QUALITY ☐										
HEALTH & SAFETY ☐	SUPERVISOR ☐										
MAINTENANCE ☐	ADMIN. ☐										
COMMENTS : SUGGESTION APPROVED ☒ SUGGESTION DENIED ☐ COMMENTS : 1. SUGGESTION IS IN THE E.I.											
PERSON RAISED & RESPONSIBLE LENE		DATE OF IMPLEMENTATION TARGET DATE : ACTUAL DATE :									

POSS. COPY - E.I. TEAM

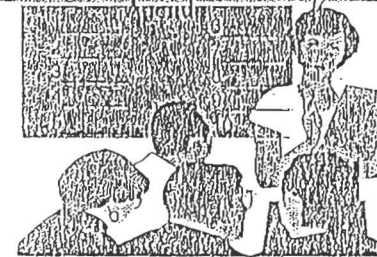
YELLOW COPY - SUPPORT

WHITE COPY - FACILITATOR

Employee Involvement Meeting

Agenda

1. Number of attendees at meeting
2. Review previous minutes
3. Health and Safety concerns
4. Review status from champions
5. New issues - identify the benefits and concerns
6. Action required for new issues
7. Are any new suggestions to be reviewed?
8. Are any outstanding suggestion to be reviewed?
9. Are any support persons or department required at next meeting?
10. What issues need to be followed-up for the next meeting?



51 (Employee Involvement) Meeting - AIM Strut Cell - Wednesday 3 May 2000 - Employees Actively Participating (Speaking) in Discussions - Observation Chart

Topic	Basil C \ male	Richard B \ male	Jeremy C \ male	Anton B \ male	John V/Lead C \ male	Manny C \ male	Pedro C \ male	John L C \ male	Issadore C \ male	Nigel C \ male	Elizabeth C \ female	Charlie C \ male	Elmarie C \ female	Mornee C \ male
Video (S)	4				4	4	6							
Machines	3				5	2								
Quality					2									
Suggestion					1									
Service in	1				1	3	1							
Suggestion					2									
Wires	6				5							4		
Downtime					1									
Grubscrew	5				5	2			1	4	1			
20 blade					1		1							
housekeep					1		1							
setup instr					1					1				
rack piston					1		1			1				
dilemma drill	3				5		1			5	1			
units	8			2	2		1			2	2			
tools	3	1			3					1				
space					1									
grinder	6				7	1			1	3	1	2	sleeping	
discipline					2									
overtime	2				2	1								1
automatic	1				1		1	2	1					
sample	1				1			1		1	1			
mistakes	2				1		4			1				
kliton	1				1		2	1						
access	2				4		6	1			2	5	awoke	
board					3						2	1		
TOTAL	48	1	0	0	63	13	25	5	3	19	10	12	0	1

META-CATEGORIES OF LITERATE FUNCTIONS (HULL et al 1996- CHANGING WORK, CHANGING LITERACY)

Performing Basic Literate Functions 1	Using Literacy to Explain 2	Taking Part in Discourses Around & about Text 3	Participating in Flow of Information 4	Problem Solving 5	Exercising Critical Judgement 6	Using Lit Exercise, Acknowledge, or Resist Authority 7
Completing Forms	Analogizing	Citing (A) (B)	Coaching	Brainstorming	Assessing	Actioning
Copying	Contextualizing	Constructing Rules	Constructing Rules	Calculating	Bestowing Blessings	Admonishing
Correcting	Demonstrating	Highlighting	Giving Instruction (A) (B)	Categorizing	Certifying	Assigning
Identifying	Dramatizing	Mining	Invoking	Conjecturing	Critiquing	Constructing Rules
Keyboarding	Elaborating	Perusing	Practising	Creating Hypotheticals	Disputing	Deferring
Labelling	Exhibiting	Presenting	Providing Linguistic Assistance	Gauging Reactions	Evaluating	Fudging
Locating	Explaining	Quoting	Receiving Instruction	Justifying	Highlighting	Gaining Consensus
Looking Up	Illustrating	Recounting	Requesting/Providing Clarification	Planning	Inferring	Gauging Reactions
Matching	Role Playing	Referencing	Seeking Direction	Problem Solving	Interpreting	Giving Direction (A) (B)
Note taking	Show -and-Telling	Reflecting	Seeking Instruction (A) (B)	Representing ..	Irony	Granting Permission
Practising		Signifying		Revising	Validating	Interpreting B
Proofreading		Summarizing			Verifying	Invoking
Providing Documentation						Irony
Reciting						Proposing
Recording						Protecting
Requesting Permission						Reprimanding
Tallying						Requesting Action
Translating						Requesting Permission or Approval

ANNEXURE 7

Excerpts from the transcript of the EI meeting of the Gas Springs Cell. The speakers are : Donald (D); Errol (E) and the Cell Facilitator (F)

D OK...ek wil terug gaan na die week voor daai wat ek nag gewees het....daai twee weke .. Dan skryf julle elke keer ...skryf julle elke keer ...”julle moet die masjiene skoonmaak en die vloer skoonmaak”...en die man hier (pointing to M) ..hy werk saam met my nag.. Hy kan vir jou sê hulle maak skoon ..hulle tel daai planke op hulle maak reg skoon , maar die next oggend is dit weer geskryf...daar in...dit kom nie daarin nie...op daai ander bord..

54 *OK...I want to return to the week before I started working night shift.those two*
55 *weeks. Then you [guys] every time write ..every time you write [on the board]*
56 *“You must clean the machines and floors” ...and this man here..(pointing to M)*
57 *he works with me on night shift,he will tell you they (other members) clean .the*
58 *lift the planks and clean out properly, but the next morning we find the same 59*
message written on the board... that should not be....it must not come on that 60
board.

S Na daar was eenkeer geskryf ...omdat daar water en burrs was op die vloer....
61 *After that it was once written.... because water and [metal] burrs was lying on*
62 *the floor...*

D Maar hulle verwag dit van....ons...
356 *But they expect that from us.....*

F Hulle sal...dis twee different ..catogories..dis nie dieselfde ding nie...die quality standards en die world class standards is twee different ...dinge..completely different dinge op world class het jy mos dertien measures ...en op quality het jy mos...jou specifications dis twee totally different dinge..
357 *They will...it is two diffrent catogories...it is not the same thing... the quality 358*
standards and the world class standards are two different things... completely
359 *different things... at world class you have thirteen measures...at for quality you*

360 *have....specifications...it two totally different things...*

D O...die specs.....

361 *O...the specs[ifications]*

F Daais sit.....

362 *Thats correct..*

D maar vir ons om ..om daar te is...die supplier..ons se supplier van die tubes
 ...daar is pin holes binne in die material in....nou met daai gee ons 'n bad
 service

363 *But for us..to be there...the supplier..our supplier of tubes...there is pin holes* 364
 on the inside of the material ...now that gives us a bad name

F slegte pype..

365 *Bad pipes.....*

D Nou ons gee daai...ons gee daai weg customer service en ons kan nie ons
 ander customers satisfy nie....

366 *Now we give that away...we give away customer service and we cannot satisfy*
 other customers....

F Nou wat ek wil hê julle moet ..er..er...supplier certification...sit dit ..daar in (in
 EI minute book) Kriel..julle wil supplier certification hêvvir almal die
 bondels wat sal deurkom...daai meen hulle moet 'n final inspection doen voor
 hulle dit ship....verstaan jy..? so as die goeters hier kom dan weet jy , jy hoef
 dit nie te check nie..

368 *Now what I want you to do...er..er... supplier certification...place that there (in*
 the EI book) Kriel...you want customer certification...for all the bundles of 370
 pipes that come through....that means that a final inspection must be made
 before it is shipped... do you understand...so when the things come here.. You
 do not have to check it..

- E Maar hulle sê hulle check die material as dit hier kom...
- 373 *But they say that they check the material when it comes here....*
- F dit word nie gecheck nie...julle kan request ...
- 374 *It does not get checked...you can request it *(checking)*
- D Florrie...het my gesê daar is nie 'n spec..G (company name) het nie 'n spec
...G het nie vir die supplier 'n spec...kyk hier ons wil daai standards hier hê
nie...daarom ship daai mense vir ons...
- 375 *Florrie...told me that there is no spec ..G (company) does not have a spec...G*
376 *does not have a spec for the supplier... look if we want those standards*
377 *here...that why that people must ship [quality products]*
- F Ja...maar as ons 'n certificate het dan moet ...hulle mos according to 'n spec
werk want op die certificate wys vir jou..daar is 'n bottem en 'n top limit dan
wys hy vir jou waar hy lê ..
- 378 *Yes, but if we have a certificate, then they...must work according to a spec, 379*
because on the certificate it will reflect there...there is a bottem and a top limit
380 *it that indicates to you what ..[are the tolerances of the pipes]*
- D Jy moet opdraw ou pël.....dit kom na dieselfde ding toe van...wat dinge
was...gee vir iemand anders die geld op 'n ander sectiondaai is dieselfde
ding wat nou hier weer gebeur...ons is diedie mense wat hier saam met ons
werek...gee vir hulle die geld man....
- 716 *You must draw it up old pal.. It boils down to the same thing... like thigs was..*
717 *Give the money to other people on other sections... that was the same thing 718*
that happened here... the people that work here... give them the money..

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