



The human side of introducing total quality management

Two case studies from Australia

The human side
of introducing
TQM

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Abstract *The aim of this paper is to explore the reasons why businesses, having adopted total quality management (TQM), fail to sustain their reforms over time. In order to gain insights into the pressures that, despite good intentions, can make full implementation of TQM problematic, a case study approach is used. The research indicates that a lack of attention to the human element of change, especially inconsistent senior management support, a lack of involvement of supervisors and middle managers in planning for change, and lack of attention to groups of staff affected negatively by the changes, explain why businesses may face difficulty sustaining reform programs.*

Introduction

Total quality management (TQM) has been the subject of discussion among management academics for many years. Its advocates represent TQM as a superior philosophy of management and there has been considerable research conducted over the past decade that demonstrates the positive links between the adoption of TQM practices and organisational performance (see for example: Flynn *et al.*, 1995; Powell, 1995; Samson and Terziovski, 1999). However, despite the enthusiasm for TQM among organisations, attempts to introduce it into the workplace often face unexpected problems. The aim of this paper is to explore the factors that might explain these problems. The paper is based on two in-depth case studies in which the commitment to TQM was not sustained. In each case study, we describe the main TQM elements and then discuss why TQM was not sustained.

Literature review

While there is a significant body of literature examining the relationship between TQM implementation and its results, relatively little research has examined the implementation process. We believe that one of the reasons is because the implementation of the TQM process is still providing difficulties for many companies around the world, including Australia, despite the fact that the implementation process has been claimed as the determinant of the success/failure of organisations in realising the benefits of TQM (Samson and Terziovski, 1999). One of the criteria of the success of TQM programmes is its sustainability over a long period of time. This is because the failure of TQM programmes has been recorded in the literature, of which the failure rate in the



USA and Europe accounting for nearly one-third (Harari, 1993). Sustainability, however, is not solely concerned with the “age” of the TQM programme, but more importantly, its role in supporting organisational competitiveness (Zairi, 2001). A review of the literature discussing the TQM implementation processes has identified the major factors that could determine the success or failure of TQM programmes and the extent to which they yield significant benefits for the organizations (Dale and Cooper, 1994; Mann and Kehoe, 1995; Sohal *et al.*, 1998). This paper focuses on several key issues concerning the implementation of TQM programmes, particularly involving the human resource management side of implementation, which need consideration. Some of these issues are briefly discussed hereafter.

As reported in Hackman and Wageman (1995), training is the second most commonly used practice in implementing TQM, with the content being primarily focused on interpersonal skills, quality improvement processes, problem solving, teamwork, statistical analysis, and benchmarking. The underlying assumption is that change occurs as a consequence of education and training, not only in terms of individual attitudes and behaviours, but also as a result of changed organisational practices (Coyle-Shapiro, 1999). Specifically, managers who have undergone a training programme are expected to be able to act as agents of change. The study by Wilkinson *et al.* (1994) indicates a strong relationship between the adequacy of training and the success of TQM programmes. However, the results also identified a number of key concerns, including the manner in which production demands undermined the opportunity to attain the maximum benefits from the training, and the lack of resources to implement the knowledge gained from the training.

Employee participation has also been acknowledged by TQM proponents as instrumental in the success of TQM programmes (Lawler, 1994). The underlying principle is that all employees must participate in, and be responsible for, the quality assurance of their work as well as continuously searching to improve the process (Ishikawa, 1985). However, those responsible for introducing change need to win the commitment of the employees. According to Verma and McKersie (1987), employees will be willing to participate in TQM if their views on the benefits of TQM are positive, and will withdraw their participation if they perceive the opposite. More specifically, the findings of the study by Coyle-Shapiro (1999) suggest that the employees’ assessment on the beneficial impact of TQM is more important in predicting subsequent participation in TQM than is their initial participation. Gardner and Carlopio (1996) hold that the employee perceptions of their firm’s TQM programmes are related to their affective reactions, which will determine their level of participation. They further argue that there are several elements of such affective outcomes, most notably job satisfaction which is primarily a result of their feelings of being involved and, more importantly, their degree of job empowerment.

The issue of empowerment, however, involves changes of managerial roles. However, because TQM programmes are commonly implemented in a top-down fashion, the role of middle management, including supervisors, is important in conveying the message to the lower level of the organisation, notably shop floor employees (Hackman and Wageman, 1995). The role of middle management, while central to successful organisational change, and has not received serious attention in studies on TQM (Coyle-Shapiro, 1999). This is despite the fact that there is always potential opposition to TQM from this group, particularly those elements of TQM relating to employee involvement and empowerment (Klein, 1984).

The remainder of this paper is structured as follows. The next section presents a summary of the research methodology. The two case studies are then presented, each describing in quite some detail the TQM elements implemented and the reasons why TQM could not be sustained. Finally, the discussion section identifies the major reasons for TQM failure.

Research methodology

Various companies were approached and assessed for inclusion as case studies. These companies included a bank, a textile firm and a truck manufacturer. However, it was decided to choose mainstream, relatively typical firms that had a degree of commonality. Unusual cases were avoided. The two companies that were chosen are relatively large, deal with a number of unions, have relatively sophisticated technology applied across a breadth of production processes, have international corporate linkages and markets, and enjoy access to resources to implement change. Both companies had entered the 1990s with a weakened competitive position and had chosen Deming's total quality management philosophy as the basis of their reform programme.

Over a period of five years during the 1990s, the researchers visited the companies and conducted interviews with management, unions and production employees. Individuals who were central to the reform process were interviewed several times. Many of their comments have been quoted in the paper in order to reveal the full colour and nature of the issues. Corporate documents were investigated to gain further insights. The five-year time period allowed the reform cycle to be studied in full, from inception through to implementation, review and, in these cases, withdrawal from TQM. Commitments to confidentiality require that the two companies be referred to as MetalFab and SteelCo.

MetalFab, an affiliate of a large Japanese multinational corporation, commenced operations in Australia in the mid-1960s. The company produces large, metal-based consumer goods. In the early 1990s it employed 1,700 workers on a large site in the suburbs of an Australian capital city. Seven trade unions represented the workforce, which was mostly made up of migrants from

non-English speaking backgrounds. The working environment at the plant was far from pleasant. The production line stopped for two to three minutes at each workstation to allow a group of 10-12 workers to complete their task. Work was continuous, noisy and dusty.

SteelCo is a subsidiary of a large Australian company that was established in the early 1970s to add value to the output of other subsidiaries of the same parent. In the early 1990s, it employed 1,500 workers on a very large site in a rural area, just beyond the urban fringe of an Australian capital city. Three trade unions represented the workforce that comprised mainly Australian or English-born people. The plant is a relatively modern, clean, but noisy, workplace, divided into a series of production lines, each in its own building. The production process is highly automated and work mainly comprises controlling the production process through the use of computerised control panels.

Case study I: MetalFab

Underlying MetalFab's weak sales figures and consequential lack of profitability was the poor quality of its products. Improvement in product quality was essential if the company was to succeed in export markets and hence achieve the sales volume and economies of scale necessary to become profitable. Improving quality was made difficult because of high labour turnover. "The costs of high labour turnover are clear: rehiring, on-going loss of skill and knowledge, continual lack of experience and poor returns to training" (Barlow, 1989). Hence, MetalFab faced a "vicious cycle" of problems that seemed to prevent it becoming competitive. Poor quality of product prevented sales reaching break-even levels. Production workers lacked the skills and commitment necessary to make a saleable product. High employee turnover and absenteeism made it uneconomic for MetalFab to build skill levels.

MetalFab's parent in Japan had developed a corporate version of TQM that defined, in precise detail, how to build MetalFab's product. The parent had been applying pressure to Australian management to adopt and implement the system which Japan saw as the key to corporate success. The main thrust of the reforms was directed at the shop floor. Most of the company's problems, whether they be absenteeism, turnover or poor quality in production, emanated from the production workforce. They had the least skills and the least commitment. TQM offered a solution. It placed great importance on shop-floor work-teams and their potential, with appropriate training and autonomy, to manage the plant more effectively. More status, training and responsibility were to be given to the shop floor in the expectation that this would enhance productivity and quality and enrich the working lives of the operators, thus addressing the company's endemic problems with absenteeism and labour turnover.

MetalFab focused on four main structural elements of TQM: teams; a skill-based career structure; a new quality assurance system; and management restructuring to focus on production.

- (1) *Teams.* MetalFab made teams the focus of its implementation of TQM. It believed that teams would enhance both productivity and work satisfaction. They were perceived as allowing employees to gain a greater appreciation of what the management function entails, thereby developing a greater mutuality of interest with the company. Team members would develop and exercise interpersonal skills for solving problems. Performing and co-ordinating the jobs assigned to a team would offer greater challenge and involvement than performing any one job alone. Finally, because the team is assigned an identifiable part of the product or process, members would more clearly see the relationship between a specific job and the larger goal. The concept of work teams involved the notion that operators in the workplace could rotate between jobs, with team leaders assigning people to tasks on the basis of productivity. Teams would therefore require all the skills necessary to complete the work for which they were responsible. Team members would share responsibility for the quality of the work performed by the team and ensure the team produced quality outcomes that fully satisfied “customer expectations”. Teams would have the opportunity to meet on a regular basis to discuss work matters, plan, problem-solve and co-ordinate.
- (2) *A skills-based career structure.* An important aim of the team concept was to reduce barriers to labour flexibility among production workers, among tradespeople, and between production and trades. A central concept of the team was that nobody “owned their job”. Team members collectively took responsibility for their tasks. Each could support or replace the others as needs arose. Teams decided who would undertake particular tasks and for how long. There was to be no classification within the team except by skill. The team had to be flexible, dynamic and open to continual improvement. Thus MetalFab moved from having 300 classifications to one per shop. The notion of self-managing work teams could not be implemented without MetalFab making substantial improvements to its training scheme. The existing scheme was haphazard and inadequate, and could not support either the company’s aims for product quality or multiskilled, autonomous work teams:

We barely had a training process. The personnel section was full of industrial relations people. People basically walked in, through the office, onto the line and away you go. And you wonder why people landed in trouble (Manager).

The team-based production system required a more skilled workforce. Not only did the workers need to be able to do all team jobs, but the team leader needed considerable management skills:

Because the teams are responsible for cost, volume and quality targets, they must be able to understand the data at the end of each day (Manager).

The focus on skills and training was emphasised by the use of illuminated boards at each work station, indicating the skill levels of each employee. The boards were to play a significant role in the reform process. They indicated each individual's pay level, and what they needed to do to achieve the next pay rise. In summary, the new skills structure had three main aims. First, to reduce the cost of waste and rectification of poor quality that resulted from poor workmanship. Second, to provide an incentive for employees to remain with the company. Third, to support the concept of production teams comprising multiskilled employees.

- (3) *A new quality assurance system.* MetalFab wanted to incorporate quality assurance into the construction of the product, reduce the cost of repairs, eliminate the "end of line inspector" and raise the quality of the end product to market levels. Under the new system, multiskilled operators would assure their own work quality with the support of their team, thus removing the need for inspection. Many techniques were introduced to emphasise the new responsibilities. For example, "chisel tests" were to be conducted four times daily. A chisel and hammer were used to test the welds on products passing along the line. Operators would tick and sign a check-sheet, taking personal responsibility for the quality of the join. The items tested were the sample for all products produced. Any faults found would be investigated on all products produced since the previous test. Similarly, operators would sign a document when they had completed regular maintenance on their equipment. Having taken personal responsibility for quality, the level of interest and commitment was expected to increase. The new quality system aimed to introduce a new discipline into the production system. The old system had been haphazard. Few production methods had been documented, leaving methods and standards to worker choice or supervisor instruction. Operators often moved around the plant to cover absenteeism, thus introducing scope for variations in work process and output. There was also an incentive to leave faults on the product as their rectification occurred during weekends, and were paid at overtime rates. Together with the generally poor skill level of employees, this meant that too many faults were built into the product for the inspectors to find. Even when faults were discovered, the labour time and materials required to correct the faults eroded profitability. TQM gave the company the opportunity to require more accountability for quality of work.
- (4) *A renewed focus on production.* A further aspect of implementing TQM for MetalFab was to centralise authority and focus attention on production. The existing management structure was viewed as being

remote from the production process and distracted by the various specialist streams. TQM would focus attention on production in two ways. First, staff in the functional areas of production, quality and maintenance reported to different directors. A re-organisation would bring all service functions under production management. Second, strengthening of the team and expanding its decision-making role would lead to a reduction in supervision and a flattened management structure. The next step in the procedure was to start pulling supervision into the framework of the team. The team leaders were to take on sufficient additional responsibility to allow the general supervisor role to be disestablished.

Why TQM was not sustained at MetalFab

Despite the firm intentions of the managers responsible for implementing TQM at MetalFab, the project faced difficulties that led eventually to it being disbanded. These difficulties can be summarised as: a lack of senior management support; a continued “production at all costs” philosophy, and opposition from individuals and groups. These are briefly described below:

- *Lack of senior management support.* Soon after the company committed itself to TQM, a new manufacturing director was appointed who had no commitment to the participative element of TQM. Teams, in particular, suffered from a lack of support:

We had a major problem. We were trying to instil a new method of supervising people from a cooperative point of view, but supervision and management above that had not been trained. So we had a situation where we had taken away leading hands, trained them, brought them back with all these new ideas, and nothing else had changed. They said “I am treating these guys like humans and my supervisor is treating me like a dog” (Manager).

The manufacturing director’s opposition to the core reform, participative decision-making, was a fundamental obstacle, one that caused teams to lose confidence in their new role:

There was no participation. It didn’t matter what the teams said, it would not go any further. If there was a suggestion made, it would be quashed. I remember once he [the Manufacturing Director] walked down the line and one guy made a suggestion to him. He came storming into the office. “You’ve got people here telling me what they want. You don’t let people tell you what they want. You go and tell them what they want and if they don’t like it, they go.” He was opposed to people on the shop floor having any say at all (Supervisor).

Recognition of where the true authority resided meant the task of implementing teams and participative decision making was impossible. The meetings introduced the form but not the substance of a change in decision making.

- *Production first.* Implementation of the new structures, especially the teams, was hindered by persistent erosion of resources in favour of more immediate, and seemingly more important, demands:

Manufacturing people are always more worried about today's problems, getting products made today, than new structures for long run improvement. Day to day operational problems, like the level of humidity in the paint shop causing rain, take precedence (Manager).

The central elements of the reform package, teams and multiskilling, were jeopardised by the priority given to daily production, to the frustration of those responsible for implementation:

Another problem was cross-training. The aim was to have everyone cross trained but that takes time. The demands of production meant it was wise for supervisors to leave the most experienced workers, capable of training, to work on the line because there would be least disruption of work (Supervisor).

The "production first" philosophy was a barrier to many elements of the reform process:

The manufacturing director's favourite saying was "We are here to build products." Any threats to this philosophy, whether it be team meetings, team leaders and supervisors preparing work specification sheets or formalised methods to maintain equipment or clean the factory, all were opposed (Union Official).

- *Opposition from individuals and groups.* Various groups of people had their status or authority diminished by the introduction of teams and the transfer of specialist functions to the manufacturing director's control. For example, the new concept of "internal customer" meant the power relationship between groups was altered. The engineers, in particular, had seen themselves as experts whose task it was to design parts and work processes. TQM involved a redefinition of the role so that engineers had to serve production people:

A lot of expertise and authority is held in the service departments; maintenance, quality assurance, engineering, personnel. Under the new structure, the relationship of these bodies to the team would change. Now the team was accountable and could contact the service departments. For example, quality assurance was to hand over the training and inspection functions to the teams. In practice, the service departments have resisted because they want to remain discreet. Engineers, for example, have a professional status, they do not want to serve team leaders (Manager).

Potential loss of employment due to the reforms meant that many individuals had good reason not to support the process. Supervisors, for example, clearly faced a loss of security as well as authority:

A number of managers saw it as erosion of their authority. To share some of their decision making with people on the floor they felt was perhaps demeaning. They felt a loss of respect and integrity. They supported the reforms in word but not in deed (Manager).

The outcome was a division between the words and policies of senior management, and the actions of many front-line managers who were responsible for implementation of the new system.

In summary, some elements of TQM were implemented effectively. However, there was insufficient acceptance of the changes because the company had not effectively managed the human element of TQM. While the implementation group were converts, the people who had most influence on the factory floor, the manufacturing managers, supervisors, trades-people and quality staff, varied from ambivalence to opposition.

The collapse of TQM

Teams were designed to be the capstone reform, as noted earlier. Considerable resources and support were supplied to foster the teams' success, especially when they were first established. However, because the company had not accounted sufficiently for the human element in change, many factors combined to impede team operations. Opposition from various quarters and staff plundering by other sections of the plant to cover absenteeism, resulted in insufficient stability for teams to function smoothly. Eventually, loss of the team leaders' planning time, away from production meant that the team concept was abandoned:

Initially the release time for team leaders was done well, allowing for patrols, checking equipment and work. This would happen two or three times each day. But then production started to rise, work injuries occurred, and team leaders were called to do full time work. Gradually, the team leader patrols were lost (Supervisor).

The loss of support for the teams led to disillusionment and scepticism about the company's sincerity in the introduction of TQM:

The process died. Meetings stopped, everyone lost interest. Everyone saw management cool and did so too (Union official).

The capstone reform was therefore dismantled. Without team meetings and team leader capacity to manage the team, TQM became inoperative.

Case study II: SteelCo

Like MetalFab, SteelCo had experienced a significant loss of competitiveness. Unlike other companies in its industry that responded by closing older plants, at SteelCo the plant was relatively modern. Its capital equipment was still considered "state of the art". To achieve the significant productivity increases required, it turned to its human resources. Better management, a more skillful and committed workforce would, it was hoped, generate valuable gains in productivity and quality.

SteelCo management identified TQM as the management philosophy it wished to adopt to address its management problems. Consistent with this

philosophy, the company streamlined its management structures by removing the specialist streams. Its administratively complex job classification system was replaced with a five-tiered, skill-based wage structure, supported by a training infrastructure. Finally, consistent with TQM, it introduced an elaborate consultative system that allowed for employee input at all levels of the company's decision making.

Employee participation

The traditional management strategy at SteelCo focussed on the importance of continuous production and sought to achieve productivity growth by having workgroups compete against each other. However, in these circumstances it was in the interest of groups to deflect blame for stoppages and to sabotage rival work groups. The people who were successful in this environment were those who handled conflict the best. This tended to reinforce the authoritarian management style. Consequently, following TQM, an elaborate consultation structure was established. Each section was to hold regular, hour-long meetings of all staff to discuss ways of improving the performance of their part of the operation. Further, each section nominated a representative to join plant level meetings.

Skill-based career structure

Having relatively modern equipment, SteelCo could not look to capital upgrades to solve its problem. The source of its problems lay in its management systems, especially human resource management:

SteelCo was short on skills. In the past we hired unskilled people for unskilled jobs (Manager).

The training model was presented as a matrix with five levels. To be accredited with any level an employee had to complete the training modules that made up that level. The breadth of skills required meant that employees would become much more broadly skilled than before. Most importantly, the model was designed to overcome artificial demarcations and achieve a much more flexible workforce. All job classifications were to disappear. Anyone with the skills could be asked to undertake any task:

We wanted to get the specific job right out of the pay structure. The pay you get is not to do with the job you do but with your level of skill and knowledge to do a number of jobs (Manager).

A key characteristic of the training model was that it linked skills with remuneration in a manner that supported the introduction of TQM principles:

At SteelCo we are trying to develop a quality culture, a culture in which everyone strives toward continual improvement. People have to be offered something that encourages them to want to learn, and by learning, contribute back to the organisation in improved performance (Manager).

The company believed that training would be the key to breaking down demarcation and lead to a much more flexible workforce.

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Augmentation

Acceptance of TQM as a management philosophy brought the company to look for ways to have all employees working in a mutually supportive direction. It needed to address the “them and us” culture that had emerged and come to characterise the plant. There was also a view that the separation of specialist functions, such as engineering, from production management was depriving the production function of managerial talent. This led to a strategy, shared with MetalFab, to reassign specialist service staff to report to production management. It was considered that the specialist groups like the engineers, metallurgists and other service centres had priorities at odds with production demands.

The new structure transferred the electrical and mechanical tradesmen from the engineering department to the various production departments. Individual tradesmen came to report to production supervisors. Production superintendents, the most senior managers in each production department, thereby gained much greater control over their unit’s operation. Conflict situations that previously required negotiations between production and specialist superintendents could now be resolved by a production supervisor.

The new management structure was to give greater autonomy to production management but also to make managers more accountable, a requirement of TQM:

We made every superintendent fully responsible for his “business”. Restructuring has meant that quality control, metallurgists, electrical and mechanical people now report to production superintendents. This means production units can stand on their own. In the past they were dependent on autonomous specialist groups who would respond to requests in priority order (Manager).

Why TQM was not sustained at SteelCo

Despite a major investment in training and employee participation processes and an extensive overhaul of its organisational structure, SteelCo’s commitment to TQM faded over time. Similar to MetalFab, a lack of attention to the human element of change led to disappointment with the returns on these initiatives. Opposition from particular groups and confusion over the meaning of “participation” were the main factors explaining why TQM was not sustained. These reasons are discussed in more detail below.

Opposition from supervisors. Supervisors were aware that the focus of training was on the operators, to give them more knowledge and skill. Little training was given to supervisors:

We didn’t have enough training or involvement of the supervisors. There was not enough opportunity to increase their skills. Their jobs were threatened. There was no programme for

them to train toward senior supervisors or general supervisors. Many supervisors were alienated because we started at the bottom with the training. This was a big mistake. You have got to do everyone at the one time so nobody thinks the group below them is coming up to take their place (Manager).

Supervisors feared their positions would disappear:

The problems came from the supervisors. They were worried that the ironworkers were coming up to their level and become potential supervisors overnight. The supervisors felt threatened (Manager).

The threat to their positions, loss of status, and lack of active participation in the reform process led to many supervisors leaving:

Staff turnover increased because some people lost status. Supervisors could be asked to sweep the floor. Some left (Manager).

Lack of senior management support. A factor explaining the dilution in commitment to TQM was a change in personnel. The senior plant manager who introduced the philosophy to SteelCo was replaced by one with less commitment. TQM remained official policy, but little genuine commitment to its implementation was evident:

We often pay lip service to TQM. We know it is good for us. We tell our bosses we are doing it but in the end we know our task is to keep the line running. The current works manager is an action man who identifies a problem and imposes a solution. The previous one, who introduced TQM, was out to harness the ability of all those who worked in an area to the purpose for which the unit exists. We underwent a certain amount of change but now it is unrolling a bit (Manager).

Like at MetalFab, the fact that superiors did not demonstrate TQM methods or require it of their subordinates meant that it was separate from the real decision-making process. Training in itself, proved to be incapable of leading reform as had been anticipated. It was not sufficient for employees to understand a management philosophy, they needed incentive to apply it:

TQM is a fundamental change of management style, values, perception and interpretation. It is not something we have been able to practise particularly well. I believe this is because senior managers are not modelling the procedures for people below. We have training. We rely on this to engender TQM behaviour. This is totally the wrong way round. We should practice TQM, demand it from people who report to us and supply training so they can comply. Providing the training will not create the need. TQM is an overcoat we put on when it is in vogue. If it does not flow down from the top it will never flow up (Manager).

Confusion over the meaning of participation. There is considerable evidence that the managers, workers and their unions were interpreting participation differently. The initial understanding of TQM may have overemphasised consultative decision-making and the cessation of production when faced by production problems that put quality at risk:

Employee participation has caused us a lot of problems because we fostered a wrong perception. Workers believed there would be management by consent, "majority rules". This

perception is wrong. We are not a democracy. Both sides got it wrong. Many managers and supervisors do not know what consultation is (Manager).

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In summary, those responsible for introducing change failed to ensure that there was sufficient support across the plant. Similar to MetalFab, tradespeople, specialist service suppliers, supervisors and production managers were disadvantaged by the reforms because their authority, autonomy or capacity to meet production targets were impeded. It created industrial tensions because of incompatible expectations of the authority of the process. The meetings absorbed a great deal of time and were not delivering the expected outcomes.

Discussion

In this section, three major reasons for TQM failure are discussed, namely:

- (1) opposition from middle management;
- (2) dissatisfaction with employee participation; and
- (3) the inappropriate design of training programmes.

To a large extent, all of these factors reflect a failure to fully account for the human factor in the introduction of TQM.

Opposition from middle management

A common feature at MetalFab and SteelCo was the opposition of certain groups to the introduction of TQM. Managers outside the HRM sections were often excluded from the discussions over TQM. At MetalFab, managers complained that they were the last to hear about plans and agreements. The consequence was that middle management felt that the company and unions were imposing these new systems on them, and they resisted this intrusion into their area of responsibility. Middle managers have financial budgets and production targets as their key objectives and have reason to resist threats to their achievement. Meetings on paid time, add to cost and reduce production if the lines are stopped. Consequently, the agreed team meetings at MetalFab were cancelled and team leaders lost their time allowance, forcing them to work full time on the production line. Less training took place at SteelCo than had been agreed because management would not release people to undertake the training. This was because "production demands gave no headroom". Managers at SteelCo opposed job rotation, preferring to leave the best person doing their job (see Curtain, 1989, p. 20). This strategy protected production but sacrificed employee progress and labour flexibility targets.

Routine aspects of quality control, maintenance, overtime and industrial relations were taken over by team leaders or supervisors at both plants, reducing the work and seemingly the career prospects of managerial staff. Managers considered that their role was being taken over by their subordinates. No new roles were identified, so they responded by

dissociating themselves from the changes, paying “lip service” as necessary, but criticising in private. They placed administrative barriers against the full implementation of the reforms.

Similar problems faced supervisors who were in a very difficult position at both plants. Their support of, and participation in, the implementation of reforms was essential but they had the most to lose from them. The general aim of having the shop-floor people undertake more responsibility was resented by supervisors who saw the enhanced status of workers and team leaders as threatening to their own positions and status. Layers of management were to be removed, placing more pressure on supervisors and reducing their promotion prospects.

Supervisors also lost status with the reduced demarcation. They were no longer “all-powerful”. At SteelCo, the supervisors could be asked to sweep the floor. The training model defined the training that operators would receive, a responsibility previously held by supervisors. Many resigned, taking a vast amount of specialised skill and knowledge with them. At MetalFab, supervisors could be asked to work on the line. They responded by “playing dead”, passively resisting, refusing to pass on their knowledge.

In summary, the lack of recognition of the central role of supervisors in implementing change was a major stumbling block. Being the first line managers, supervisors had a major bearing on the attitudes of production workers towards their work and the changes to it. The fact that they were left out of the negotiating process, had no new role defined for them, and lost status compared to the new team leaders, caused them to oppose the reforms. A manager at SteelCo summarised the position:

Supervisors and their lack of understanding and commitment to the training strategy was our biggest stumbling block.

Dissatisfaction with employee participation

The formal, participatory forums fell into disrepute and were largely abandoned at both plants. Shop-floor employees believed that the authority of the participatory meetings had been overstated and that they were, in fact, obliged to accept a “management agenda”. Managers felt that operators were being asked to contribute to areas that they did not understand. In their view, the meetings were a waste of time and frequently “degraded” into discussion of industrial relations matters. While some examples of individual successes can be identified, the case study plants did not persist with consultative forums.

Management at each plant indicated that they had too readily accepted notions of industrial democracy and had therefore misled themselves and production workers. Subsequently, they were forced to redefine “employee participation” less ambitiously. Too many people had been “taken in” by glamorous concepts like “empowerment” without understanding the

grass-roots implications. When workers saw that the initial concept was not going to be delivered, they became frustrated and cynical. A MetalFab manager encapsulated the new interpretation of participation at both plants when he said “involvement does not mean endorsement”. At SteelCo the equivalent revelation was “participation does not mean consensus”.

This conclusion supports Bramble’s (1993) observation that participation, in practice, is one sided, with management only accepting those recommendations that generate productivity growth, ignoring those that improve working conditions. Similarly, Lansbury and MacDonald (1992) found that despite a commitment at “Automakers” to participative philosophies, decisions concerning the pace of work, manning levels and allocation of work tasks remained the province of managerial prerogative.

In summary, there was little sustained commitment by management to engage in genuine consultation at each plant. One-way, one-sided information exchange, together with confusion over the meaning of “participation”, caused the reform to fail and to be abandoned.

Training programmes

Experience at both plants demonstrates that training is not necessarily the solution to demarcations or an appropriate technique to introduce “cultural” change. Demarcations had applied within, as well as between, unions, reflecting past corporate policies on specialisation and the division of labour. SteelCo found that it had overestimated the potential of training to affect change. “Throwing some training” at a problem was not a solution. “If your boss says one thing and your trainer says another, you go with your boss.”

Senior management at SteelCo, and to a lesser extent at MetalFab, felt that little productivity had resulted from the resources invested in training. The poor educational standard of production workers, especially those with little knowledge of English at MetalFab, was seen as a major barrier. However, others, particularly union officials or management staff close to employees and unions, tended to say that senior management was unrealistic in the time frame they set for a productivity outcome. Enhancing productivity through education or consultative decision making needed to be seen as a long term aim. They were confident the returns were “in the pipeline”.

In summary, training and skill-based career structures did not prove to be the democratising forces as predicted by their advocates. Nor did they supply an observable improvement in productivity, even if shop-floor flexibility was enhanced. They did prove extremely expensive, particularly at SteelCo where ambitious plans to “transform” the workforce proved to be unrealistic. By contrast, MetalFab’s relatively modest “on-the-job” training programme was better appreciated, mainly because it provided some relief from the most monotonous jobs.

Conclusion

In the early 1990s, faced by severe competition, SteelCo and MetalFab resolved to improve quality and productivity by introducing total quality management. Each company enjoyed some significant savings and productivity improvement. These emanated mainly from work intensification for management, especially supervisors, and a degree of greater flexibility among shop-floor workers. Shop-floor employees achieved improved access to training which led to pay rises through reclassification. Supervision became somewhat more humane. However, attempts at changing the philosophy of management, as understood in total quality management, were unsuccessful and were not sustained. The primary factor explaining the lack of success was the lack of attention to the human element in change. The implementation of TQM focused on structures, such as teams and training schemes, rather than the values or attitudes of the people involved. Importantly, the reforms were introduced without sufficient explanation, or the involvement of middle managers or supervisors, which caused these groups to oppose the reforms. They lost status, security, and career prospects through TQM, but were expected to play key roles in its implementation. They responded with passive resistance ("playing dead"), leaving elements of TQM either partially implemented, unresourced, or isolated. The new structures were superimposed on the two organisations, leaving the existing structures to continue. Having attempted to introduce total quality management without accounting for the human element, the reform could not be sustained.

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