In search of excellence in public service delivery: Primary and supportive dimensions of Total Quality Management

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Abstract

The concept of total quality management (or TQM, as it is widely known) first appeared within the narrower confines of the manufacturing sector in an attempt to improve the quality of tangible products. However, it was soon recognised that TQM is more a philosophy and an approach that can be applied throughout all sectors of the economy to improve services and products, as well as the environment within which employees have to work. This article provides a definition of TQM within such a broader understanding and identifies dimensions that are required to ensure its effective implementation. It draws its conclusions from a recent in-depth study to develop an implementation framework for the South African Air Force.

1. Introduction

Being human inherently implies striving for something better. History records this phenomenon in great detail throughout the ages. This desire encompasses both individual, mental improvement and the improvement of the world we live and work in. The philosophy and principles of total quality management (TQM) provide a valuable tool in the quest for excellence in public service delivery.

The constituent parts of the concept of TQM have been part of human endeavours for a very long time, and have been contemplated throughout history. Its currency as a topic of immense interest lies in the combination of these parts into a philosophy and approach that have been widely used internationally in different sectors of the economy in search of excellence in service delivery. In a recent study of TQM that set out to develop an implementation framework for the South African Air Force, 14 dimensions were identified that are crucial for the effective implementation of TQM (Oschman 2004). The dimensions are divided into two groups, consisting of six primary and eight supportive dimensions. This article sets out a definition of

TQM, discusses the crucial dimensions for effective implementation in greater detail and provides some general conclusions on the implementation of TQM.

2. Defining total quality management

The lack of uniform terminology hampers the efforts of those who wish to study or discuss TQM. TQM is a management philosophy that is generally accepted in America and Europe as a strategy to improve the productivity of institutions. However, several definitions are used to define TQM philosophies, strategies, approaches and processes (see Deming 1988; Crosby 1979; Feigenbaum 1986; Ishikawa 1985; Juran 1988). A common definition is important to prevent confusion arising among staff members and to resolve disagreements that may arise within and between departments in an institution upon implementing TQM.

An analysis of the various definitions in literature showed that researchers classify TQM as a

- culture
- management and institutional process
- management philosophy with guiding principles
- strategy
- system (see Evans and Dean 2003, 12; Reeves and Bednar 1994, 420; Wood 1997, 181; Savolainen 2000, 213; Yong and Wilkinson 2002, 102).

The following definition of TQM was therefore developed based on the viewpoints of the various authors referred to above:

> TQM is a *strategy* and *process* to manage an institution as an *integrated system* of principles, methods and best practices that provide a framework for the institution to strive for excellence in everything it does under the *leadership and commitment of top management*, supported by *education and training, open communication, change management, regular self-assessment, support structures*, *systems and resources*, which *empower employees* through *investing* in them to improve their performance as *teams* to deliver *continuously improved* quality products and services. Through this approach a corporate TQM *culture* will be established, to *satisfy and exceed agreed internal and external customer requirements* at the lowest overall cost to increase institutional performance in all areas such as service, financial, marketing, operational, social, customer and employee results to obtain world-class quality.

Understanding TQM and arriving at an appropriate definition of TQM for the specific institution are some of the foundations preceding the implementation of changes in an institution. It is important for institutions to find an appropriate definition for TQM within the context of the TQM philosophy. Institutions will consequently be able to follow the right direction for the successful implementation

of TQM if they formulate their own definitions that will be valid for a specific institution. Such definitions should take full account of both the primary and supportive dimensions of the TQM framework.

3. Primary dimensions of the total quality management framework

The six primary dimensions of the TQM framework are: leadership and top management commitment, strategic planning, empowerment, teamwork, continuous improvement, and customer and employee satisfaction. These dimensions drive the TQM transformation and may reinforce or supplement institutional guidelines, which are built on a core set of values and paradigms, to complement the focus on TQM.

3.1 Leadership and top management commitment

The TQM framework is based on the primary dimension of leadership and top management commitment to establish unity of purpose and to give direction for the attainment of the desired outcomes (see Collier and Esteman 2000; Dale 2003; Evans and Dean 2003; Kanji 2002; Pun and Hui 2002; Oakland 2000; Steenkamp 2001; Sureshchandar, Rajendran and Kamalanabhan 2002). It is leadership rather than management that is the essential factor in challenging times, for example, when implementing TQM in an institution. When focusing on the management of quality, top management should be directly involved and committed. Top management should visibly demonstrate its commitment through action, personal involvement in the TQM programme and by maintaining close contact with personnel responsible for implementing quality service. Good leaders convey a sense of urgency that will reduce the resistance to change that may prevent an institution from taking the steps required to complete the process. Top management should create and maintain an internal environment where all employees become fully involved in achieving the institution's objectives. Top management should commit themselves and encourage all employed by the institution to meet customer requirements through continuous improvement. Top management should also play an active role in creating strategies, plans and systems for achieving superior quality, and should include quality in core institutional values and the corporate mission. They should inspire effective and efficient use of the resources and efforts of the institution towards excellence. Visionary leadership is necessary to transform an institution to TQM and top management is required to be able to establish a long-term vision for the institution, driven by changing customer requirements as the main focus. Top management should serve as role models by reinforcing and communicating core values through their words and actions. Leadership style is important in the quest for quality as some styles support the TQM process more than others. It is important to understand leadership styles and how styles relate to team efforts.

Top management should convince employees that by pursuing a TQM philosophy, there are further benefits for the institution. They need to align internal and external stakeholders and accelerate the evolution to a TQM institution. This role should occur as follows: leadership is responsible for developing vision and strategies, aligning relevant people behind these strategies and empowering employees to realise the vision, despite obstacles. Leaders are responsible for the creation of an atmosphere in which people can believe in institutional strategy, management decisions and in their own work. To achieve this, leaders should be more multi-skilled than their predecessors. Leaders should be knowledgeable in several fields and should strive for almost anything that may increase their institution's success. Leaders should have an attitude of continuous improvement.

3.2 Strategic planning

Strategic planning is of vital importance in establishing TQM (see, for example, Billich and Neto 2000; Cascella 2002; London 2002; Oschman 2002). Through strategic planning, the specific TQM objectives and requirements of an institution must be determined and incorporated into a strategic plan. Strategic planning should be used to plan, develop and implement strategies that should result in improved customer and employee satisfaction. This action should involve employees throughout the institution, translating customer requirements into short- and long-term plans that guide the activities of every division, department, team and individual.

Strategic planning should involve leaders, managers, employees, customers and suppliers in charting a course that every department, team and employee can translate into daily activities. TQM and strategic planning should become a single process and TQM should be fully integrated and linked into the strategies and operation of the institution. The link between TQM and strategic planning should provide an integrated management system for an institution.

Three critical links are required between TQM and strategic planning:

1. The strategic plan must be customer-driven.
2. Strategic planning must provide the direction and context for TQM and must precede other TQM initiatives.
3. Strategic planning must establish a TQM culture in an institution and continuous improvement efforts must focus on achieving results that increase value to customers and ensure long-term success.

The strategic plan should also provide a linkage to the most important resource, people, who achieve the vision, mission and strategy. The synergy between TQM and strategic planning should strengthen the institution's competitiveness and enable it to achieve success in today's business environment. Forecasting future needs

should also be done, and reactions of customers and employees to certain operations should be estimated. This integration between TQM and strategic planning eliminates wasting resources on projects not directly linked to the strategic plan.

Strategic planning is the process of looking into the future and seeing that future as institutions want it to be. Strategic planning is a necessary process for the long-term success of the total quality programme in an institution. An action strategic plan should be designed to turn the institutional vision into reality. Customer and employee satisfaction is the outcome of sound strategic planning. Strategic planning provides a mechanism for institutional managers to shape their external environment, limit threats, take advantage of opportunities and enable leaders to respond to issues proactively, rather than reactively.

Strategic planning also builds institutional capabilities to espouse continual renewal as a central theme and should be included in all statements concerning the institution's vision and/or management philosophy. It must become a part of the social contract between the institution and its employees. Top management need strategic planning in the institution to raise the performance bar, both in terms of institutional goals and challenges and in individual expectations. Through strategic planning, structures and systems in an institution should be designed to promote lateral processes, including communication and coordination, between those in direct contact with customers and suppliers and those involved in the internal functions of the institution. Strategic planning also needs the kind of foresight that provides a vehicle for managing perceptions of environmental uncertainty and change, thereby enabling the clarification of perception that is fundamental to the prescient and innovative use of macro-environmental phenomena and the early recognition of institutional opportunities.

3.3 Empowerment

Employee involvement is one of the best ways to create a positive culture wherein TQM can thrive (see Geralis and Terziovski 2003; Pycraft, Singh and Phihlela 2000; Pun, Chin and Gill 2001; Oakland and Oakland 2001; Delport 2000; Eng and Yusof 2003). Empowered employees encourage innovation and creativity on all levels of the workforce. Leaders should find a successful balance between control and employee freedom to gain maximum benefit from the empowerment process. Empowerment of all employees is necessary as a source for improved performance and participation. Employees form the centre of any TQM approach, as they are involved in managing and improving processes and in serving customers. Without employee involvement and motivation, the TQM philosophy would be difficult to put into practice. Incentive schemes could reward employees and result in few limitations to their institutional achievements. They must perceive themselves as having equal opportunities in terms of institutional aspiration. Quality of life is also an important aspect of empowerment and should be rigorously managed by top management as a critical process. Institutions

should give employees the authority, responsibility, knowledge and skills they need to be effective in their expanded roles. An institution can serve its customers only as well as it serves its own employees. Employees should therefore feel compelled to be empowered.

Unless top management promote the establishment of an environment that encourages employee efforts toward institutional objectives, the barriers between top management and employees will not be bridged. In high-performing institutions, employees who do the work make most of the decisions about how the work is done. Therefore, access to data and the development of appropriate skills are prerequisites for optimising employee contributions to the institution's success. Leaders must know that employees need strong direction, a clear target and great ideas on how to implement TQM in an institution. Leaders should set standards and boundaries and should invite people to make their unique contributions. An institution can only move as fast as it develops the people who will move it. This is why empowering people is critical in overcoming competitive disadvantage and gaining competitive leadership.

Employees usually want to play a part in their institution and in its improvement. Empowerment supports the TQM process because employees at all levels have the responsibility and authority to make decisions that affect them and their work teams. Institutions cannot effectively move decision-making to the level where most of the work is done unless those doing the work have access to the necessary data and are skilled at making fact-based decisions. Top management could educate middle management, lower management and employees in decision-making processes by using, for example, group decisionmaking, brainstorming, self-directed teams and cross-functional teams to ensure appropriate decisions. Empowerment is a crucial part of a culture change that situates the decision-making process at the point where problems are the most visible. In order to be empowered to make decisions regarding their work, employees, regardless of institutional level, must understand and have access to information relevant to the performance of their institutions.

Empowerment is a portion of the delegation process that frees up management for additional tasks of equal or greater importance. Empowerment requires substantial training, job security, desire and a commitment to performance. In most cases, employees are delighted to be empowered when empowerment is accompanied by these factors. Employees who have been trained, empowered and recognised for their achievements see their jobs and their institutions from a different perspective.

When empowerment is effective, institutions soon realise that the benefits of synergy and empowerment cannot work without a participative management structure. Commitment to empowerment has implications for virtually every area of managerial and institutional work and, therefore, has to be implemented across all activities in an institution. Research has demonstrated that involvement brings about greater commitment to end results. Empowerment is the natural output of a well-

implemented TQM programme. It promotes the freedom of employees to use their initiative in matters of customer care. Additionally, this freedom creates an environment of trust, which enables staff to participate fully in the institution's cultural transformation.

3.4 Teamwork

Teamwork should not simply be used as a tool for performance improvement, but as a fundamental element to ensure that the climate in the workplace encourages all members to use their skills to make it even better (see Lycke 2003; Kreitner and Kinicki 1998; Katzenbach and Smith 1993; Warner 1999; 2000). Teamwork is necessary for the propensity of the institution to engage in non-competitive activities internally among employees and externally with respect to suppliers. These teams should have the power to make work-related decisions. Collective wisdom is virtually always superior to individual wisdom. The team and the individual should be recognised and rewarded equally. Teamwork provides an opportunity for employees to work together in pursuing quality in ways they have not worked together before. Through teams, employees are brought together with a common goal and quality improvement becomes easier to communicate over departmental or functional borders. Teams are useful in determining challenges by involving those who must implement solutions, and are crucial in the management of the next dimension, continuous improvement, another of the driving forces for successful TQM.

Teamwork is a major part of TQM implementation because it enables employees in different parts of the institution to work together to meet customer needs in ways that cannot be done through individual job performance alone. Teamwork is therefore a behavioural factor and must be part of the institutional culture. If staff are to pull together, they will need to consider themselves to be part of a functioning team. Getting staff to pull together involves a variety of leadership skills. Effective teamwork will occur when team members feel positive towards each other. The only efficient way to tackle process improvement or complex problems is through teamwork. It is important for a team leader to have the trust and confidence of all members of the team. A leader must also develop team cohesion. Two necessary preconditions for cohesion to occur are that members must be free to express their attitudes and feelings towards the team and its members, and that members must feel that they are heard when they express their opinions. A team leader must also ensure that all team members feel sufficiently confident to behave in this way.

Teamwork is viewed as one of the ways for institutions to increase the speed, flexibility and methods with which they make decisions. Teams are used to build and transform the workplace from low commitment to high commitment. Grouping people into teams could also manage the problem-solving requirements of the

institution more effectively. Teamwork can be a very powerful management strategy to improve competitive advantage and, together with people empowerment, forms the basis of managing people, the most important resource or asset of an institution.

3.5 Continuous improvement

Continuous improvement is one of the key success factors in the quality improvement process (see Garcia-Lorenzo and Prado 2003; Carpinetti and Martins 2001; Lindsay and Petrick 1998; Stahl 1995; Pearce and Robinson 2000). Through continuous improvement, managers can provide a form of strategic control that allows their institution to respond more proactively and timely to rapid developments in the different areas that influence an institution's success.

In this process, institutions move from one-off quality targets to a continuous and ongoing process, which will retain and increase employees' commitment in the long term. The inclination of the institution to pursue the incremental and innovative improvement of its processes, products and services should be the driver to achieve continuous improvement. This implies that an institution has established procedures and processes for incremental and ongoing improvements to products and services. This includes the application of techniques for problem-solving and analysis to achieve continuous improvement. Improvement seeks to eliminate problems at their source and should be part of the daily work of all employees and work units. Sources of improvement include employee ideas, research and development, customer input and benchmarking or other comparative performance information. Improvement and learning are directed not only to the provision of better products and services, but also to being more responsive and efficient.

Institutions should encourage the fostering of creativity and innovation to achieve continuous improvement. Performance measurement provides institutions with the opportunity to strengthen the institutional delivery process in the areas of quality, cost and delivery. Performance measurements keep institutions focused on continuous improvement according to the actual results they achieve in producing products and services as compared to internal baselines and external benchmarks of 'best practice'. For performance measurement, a balanced scorecard must be used as a management decision-making tool within a framework linking strategy with operational performance measures. A balanced scorecard aligns the strategic objectives of an institution with customer priorities. Benchmarking is also a positive, proactive process for changing operations in a structured way to achieve superior performance. It is a continuous process of measuring products, services and practices against the toughest competitors or those institutions recognised as industry leaders.

The most potent value of continuous improvement in TQM is where high-performing institutions create cultures that seek to evaluate and improve everything they do. A culture of continuous improvement is essential to maintain and sustain true competitive advantage. Without systematic improvement, institutions will ultimately face extinction. Continuous improvement results provide a track record

that can give an institution the advantage over competitors for service delivery and additional resources. Continuous improvement is essential for increasing customer satisfaction, and alleviating waste of employee time and institutional resources. The process of continuous improvement encompasses all groups horizontally and vertically in an institution.

3.6 Customer and employee satisfaction

Customer service and satisfaction are at the core of any institution and the main focus of the TQM framework (see Dean and Terziovski 2001; Vavra 2002; Behara, Fontenot and Gresham 2002; Eng and Yusof 2003; Parzinger and Nath 2000; Capezio and Morehouse 1993). Customer-driven quality should be the main focus of any institution, as it will ensure that products and services are delivered with the objective to satisfy customer needs. As customers are the final arbiters of product and service quality, their needs and requirements and how to deliver value should be generally understood. The ultimate goal of TQM efforts is to delight customers. Their needs should be identified and appropriate product designs or service delivery designs instituted to satisfy these needs. The focus of this dimension is the degree to which an institution's customers continually feel that their needs are being met by its products and services.

Customer satisfaction should also be continuously measured and analysed. The requirements of the final, external customer can only be met when the requirements of all internal and external customers are met. The total quality programme must begin by gauging customers' perceptions and expectations of the service to be provided by the institution. This information can also be gained from the internal feedback relationship between the internal customer and the supplier, known as quality chains. No matter how efficient the administrative system of an institution, it can produce zero defects only if customers (both internal and external) provide sufficient and accurate details to enable the quality process to meet their needs and expectations.

The importance of internal and external customer satisfaction has been a major theme in the TQM revolution. It was found that customer satisfaction results in customer enthusiasm. This implies that customers are excited and loyal because the services and products available to them exceed their expectations. Institutions must create new and loyal customers through direct interaction with them. Customers do not care about management structures, strategic planning, financial perspectives or the leader of the institution. What they do care about is the products and services available to them. It was found that if internal customers were happy and empowered, they would also better serve their other internal customers. When internal customers can work together efficiently and effectively, costs will be reduced. Thus, happy and empowered external customers and happy and

empowered internal customers could bring capabilities to the institution. The ultimate competitive advantage is established when an institution develops a culture that supports its internal and external customers.

Employee satisfaction should be equal to customer satisfaction in the institution's strategic and planning process to ensure the best results. Employees are defined as all the individuals employed by the institution, including full-time, part-time, temporary and contract workers. Employee satisfaction is the gratification and prosperity that employees get from their job. Every aspect that has to do with the influence of the job on the employee, as well as the perceptions of an employee of the job/institution, should be included in employee satisfaction. The full potential of employees should be released through shared values and a culture of trust and empowerment. Employees are the critical stakeholders as they ultimately deliver the institutional outcomes required to meet all the needs of stakeholders. There should be widespread involvement and communication to achieve employee satisfaction and this should be supported by opportunities to learn and develop employee skills. The level of satisfaction of employees should be monitored and improved continuously. One way of achieving this is to develop the full potential of the workforce, which includes employee involvement, training, recognition, safety and satisfaction. As employee satisfaction increases, an institution can expect its key performance and customer satisfaction indicators also to improve. Job satisfaction, job commitment and empowerment exemplify this. To achieve employee satisfaction, the following should be in place:

- First, top management must be involved in modelling employee involvement. Employee involvement programmes take time and require extensive commitment from all institutional levels.
- For employees to participate effectively, they need power, information, knowledge and rewards that are relevant to institutional performance.
- Institutions with involved employees have to share corporate performance and financial results, so that employees experience the impact of their actions and work.
- Reward systems that support participation by rewarding the initiation of change and the fostering of team-building should be in place.
- Training in the quantitative and qualitative aspects of decision-making and communication of real institutional information are also critical parameters to ensure employee involvement.
- Teams must be established to create involvement and share power, or to utilise problem-solving tools.
- Problem-solving tools are necessary to get employees involved. The tools enable them to improve their job performance, and give them more control over their environment.

An integrated framework is clearly necessary in which all six primary dimensions operate synergistically within an institution. An approach that integrates all six primary dimensions must be evident, if an institution wishes to transform to TQM. What is required is a close link between these dimensions and the eight supportive dimensions (discussed below) to ensure that an institution can transform fully to the TQM philosophy.

4. Supportive dimensions of the TQM framework

There are eight supportive dimensions underlying the six primary dimensions in the TQM framework. These are communication, training, culture forming, change management, support structures, systems and resources, systems thinking, self-assessment and processes.

4.1 Communication

Sound communication provides the means of raising total quality awareness and involvement and reinforcing the TQM message within an institution (see Oakland and Oakland 2001; Stamatis 1996; Swift, Ross and Omachonu 1998; Kreitner and Kinicki 1998). Effective communication among employees should be stressed, and barriers that limit communication should be broken down. Top management need to communicate down to the lowest level of the institution and should not always expect a bottom-up approach. Top management should also solicit and hold regular meetings with employees to communicate the TQM philosophy with the strategic intent to identify any problems in the workplace before developing corrective actions. Communication should be used to focus employees on customer satisfaction in order to eliminate discrepancies between internal and external perceptions of total quality. Leaders should effectively communicate the link between customer satisfaction and increased excellent results, and should encourage sceptical management to support total quality programmes by stressing this link.

Communicating positive feedback provides the fuel to energise an ongoing total quality programme. People do not automatically commit to total quality; they should be sold on it. This requires careful development of presentations and successfully selling the ideas through proven techniques. Effective communication with employees (internal), customers and stakeholders (external) is vital to the successful development and deployment of TQM in institutions. It is the customers and stakeholders of an institution, whether public or private, who will ultimately judge how well it has achieved its goals and objectives. It is those within the institution entrusted with and expected to achieve total quality goals and targets that should clearly understand how TQM success is defined and what their role is in achieving this success. Both internal and external ‘customers’ need to be part of the

development and deployment of the TQM philosophy. Communication should be multidirectional, running top-down, bottom-up and horizontally within and across the institution.

4.2 Training

Ownership and empowerment imply that employees should be trained to have the required skills and abilities to perform their work effectively (see Dayton 2001; Mathews, Ueno, Repka, Pereira and Silva 2001; Oakland and Oakland 2001; Eng and Yusof 2003; Bigelow 2002). During the training phase, employees should be informed of the history and establishment of the TQM philosophy, the structure and functions of each roleplayer within the institution and the role of top and middle management. The training should also be directed on achieving clearly measurable results. In the last instance employees should receive training in respect of the various TQM models, as well as in problem-solving processes and supporting techniques to achieve continuous improvement in results. Employees as learners should be actively involved in decision-making about training activities and so accept responsibility for their own training and development.

Education and training should cover all employees as part of an ongoing process, with the scope and depth tailored to suit each group's needs. Training and education should be the focus in understanding total quality requirements. Knowing the TQM methodology is important. The concept of doing things right the first time every time should be stressed. Employees should understand how much it costs if small things go wrong. In-service training should be instituted to educate and train employees in respect of the TQM philosophy. Employees should be trained to use continuous improvement methods so that they can position the institution in a financial grid and compare its success to that of competitors. The institutional capability should recognise and nurture the development of skills, abilities and knowledge of employees.

Likewise, managers should develop a multidisciplinary background through training, education and hands-on experience. This exposure to different functional areas will help unite the functional goals to those of the institution. The cross-functional background will help management to understand the importance and implications of total quality in each functional area. Employees should be continuously trained and retrained on the different aspects of total quality, especially the cost of quality and its relationship to the survival of the institution. They need to be frequently reminded of the importance of satisfying customer needs and specifications for the institution to survive.

4.3 Culture forming

To implement TQM in an institution requires the establishment of a new culture (see Kanji 2001; Claver, Gascó, Llopis and Gonzlez 2001; Wilton and Reavill

1995; Mellahi and Eyuboglu 2001; Pun 2001). TQM is directed at changing people's behaviour, and this applies to both management and workers. Instead of an elite group of executives running an institution, all institutional employees need to be involved in transforming to TQM. Institutions that do not use the talents of all employees, combined with the new techniques, will begin to falter and eventually fail. The new culture that must be developed must promote and support TQM, as it will allow an institution to survive new challenges. All employees must assume ownership of their work processes and the quality of their deliverables. Cultural change must be planned and must occur in a consistent and incremental manner, since experience indicates that if change is too great and unplanned, the institution will revert to the status quo.

Institutional culture requires several years to change. Frequently, a survival crisis will energise an institution to change its culture from one set of values to another. There are several processes at work to keep corporate cultures stable and resistant to change. In the sequence of institutional change, the first thing managers must change is people's behaviour. Then there must be cultural justifications for the behaviour. New rituals, new stories and new heroes are needed to justify new behaviour. These new cultural artefacts, stories, symbols and rituals need to be widely and consistently communicated. Leaders should keep employees informed of the significant cultural changes required to implement a TQM programme successfully. Institutions should develop a culture where total quality initiatives are the responsibility of all employees in the various departments rather than just the quality department. The culture-forming dimension should address the values that determine group behaviour and support the performance objectives required to achieve critical business success factors and internal customer satisfaction agreements. This dimension should also address the forces that impede change, the benefits of change, the risk of failing to change, and the rewards for change.

4.4 Change management

Successful institutional change to TQM only occurs if the manager in charge leads by example (see Kanter 1992; Kanji and Moura 2003; Lycke 2003; Dervitsiotis 2003; Addey 2001). Without this example, people will doubt the sincerity of management's espoused goals and philosophy. This means that top management must be willing to examine their own behaviour and must be capable of personal change themselves. Top management must create a context for change, articulate a theme, and demand that managers develop plans for institutional cultural change of their own design. Top management must pull change through by creating a market for institutional innovations. Effective top managers are aware that they need partners in managing change. They must cultivate the support of customers, employees and stakeholders. They must effectively utilise the human resource function, as well as external consultants. They must also ensure that these groups network with one another, meet

periodically to discuss progress, assess barriers to change and develop new responses.

TQM requires continuous change in the way things are done in institutions. Strategies to manage and cope with change should be adopted in order to maintain order. Change should be seen as inevitable, and should be planned to minimise the associated risks. Leaders should convey the message to employees that total quality is not just theoretical tools and techniques, but a change in the way that employees think and act. Institutional culture and structure should be adapted to change if the quest for continuous improvement, innovation and creativity is to be achieved. Change is neither top-down, nor bottom-up, but both. Institutions that want to change their culture to TQM will have to learn to manage such a long-term process. The 'quick-fix' approach will not work.

4.5 Support structures, systems and resources

Sustaining TQM depends on the creation of support structures and the process of linking the institution's resources to its demands (see Ghobadian, Gallear, Woo and Liu. 1998; Billich and Neto 2000; Rao, Carr, Dambolena, Kopp, Martin, Rafii and Schlesinger 1996; Stahl 1995; Husain, Abdullah, Idris and Sagir 2001; De Swardt 1995). The support structures of the institution should not be static but flexible, and should encourage the flow of new ideas and information to improve the management of total quality. This dimension also relates to an institution's ability to respond rapidly to the changing market and customer needs, as well as to external environmental pressures. TQM requires an institutional structure that demands and harnesses the full potential of the workforce. A team structure provides the means for involvement. The hierarchical structure with a facilitation role provides a clear line of authority for setting goals and reviewing progress.

Total quality does not just happen; it is created in a total quality environment. The operational environment must support total quality in every operation or total quality will not be experienced. Institutional design as a support structure is necessary to define the required components for TQM institutions to achieve customer-relevant goals. Determining appropriate institutional support structures is a constant challenge for managers when implementing TQM. At present, support structures are required to adapt to environments that change rapidly. Control systems, hierarchy, integrating roles and structures need to give way to institutions designed around information flow, with loose, flexible structures, and networks of employees who are knowledgeable and creative, and able to meet customers' needs. Institutions should use the concepts of boundarylessness in their TQM processes. Boundary-free institutions form a support structure to implement TQM by keeping people close to internal and external customers, so that they can hear, see and feel customer/employee requirements.

Information is a unique resource in institutions. The Management Information System (MIS) as support activity is sometimes taken for granted and its linking potential to support the TQM effort is often overlooked. The design and operation of an MIS, as a key system, can provide value to customers if it is integral to TQM in the institution. In a customer-value role, the MIS is used to provide customers with timely, accurate and accessible information that is of real value to them.

Document control and its underlying structures support an institution's TQM system by ensuring that information is approved, current and available. Document control at the operating level fits well with attempts to deploy process responsibility to those who perform the work. Whether documentation is controlled centrally or distributed, a consistent approach must be established at all levels of the institution to support the TQM programme of an institution.

4.6 Systems thinking

Institutions must be managed according to the systems approach if it is to be successful in implementing TQM activities successfully (see Swift et al. 1998; George and Weimerskirch 1998; Van Zyl 2002; Karapetrovich and Jonker 2003; Nel, Gerber, van Dyk, Haasbroek, Schultz, and Sono 2001). The approach enables the following:

- Institutions are systems that employ various processes to convert input into output.
- Institutions as systems must adapt to feedback provided by both internal and external sources.
- Work is done (or fails to be done) horizontally or cross-functionally, and not only hierarchically.

Identifying, understanding and managing a system of interrelated processes for a specific objective improve the institution's effectiveness and efficiency. Systems thinking facilitate constant feedback, analysis and control throughout the institution. Through the systems approach deviations should be analysed and knowledge developed to decide when and where a compensating change must be made. Without utilising the systems approach to manage an institution, an institution will be inconsistent in its response to change.

4.7 Self-assessment

Institutions without a formal plan to integrate self-assessment activities from day one when transforming to TQM will usually experience that TQM falls short of reaching their desired goals (see Russel 2000; Balbastre and Moreno-Luzon 2003; Pun 2002; Kueng 2003; Seghezzi 2001). If managers are not careful, assessment practices will fail for the same reasons many TQM programmes have failed: a lack of strategic planning, failure to consider culture and not using a systems

approach. Self-assessment should be a comprehensive, systematic and regular review of an institution's activities and results referenced against a model of performance excellence. The self-assessment process should allow the institution clearly to identify its strengths and areas where improvements are necessary. It should culminate in planned improvement actions, which are then monitored for progress. Self-assessment should indicate the extent to which it covers the institution's activities and the relative importance of the parameters chosen to measure results, including relevance of the measurements to the various stakeholders. The results should include perception or direct feedback data, as well as predicted or relevant institutional performance measures. The reliability and validity of any survey results should be discussed.

Self-assessment programmes should be viewed as more than tools to score performance. These programmes need to be perceived as a means to improve the product or service of an institution continually. They should also be consistent with prevailing TQM principles. This implies that institutions need to maintain a customer focus, empower employees and provide for the continual improvement of the institution when developing self-assessment initiatives. For most institutions the question is not whether assessment practices will be implemented, but rather how the assessment process will be integrated within institutional activities. The right culture, one that incorporates trust among institutional employees, is the primary enabler of a successful assessment programme. Therefore, institutions should view the self-assessment process as a continual means to improve the quality of the programme and not as a threat, with information used to punish or control. To implement TQM activities successfully in an institution, executives will need to use self-assessment as a tool to implement TQM.

4.8 Processes

A key part of any TQM strategy is the management of processes (see Lindsay and Petrick 1998; Kanji 2001; Mani, Murugan and Rajendran 2003; Stahl 1995). By using process management and business process re-engineering for continuous improvement, top management would know what the processes are, which are most important to the institution, how well the important processes are performed and what tools should be used to advance key processes along the maturity continuum. The essence of TQM is that it should be a process of training, institutional education and leadership support. All work should be regarded as a process and TQM should be regarded as a continuous process of improvement for individuals, groups of people and whole institutions. To improve the total implementation process of TQM, people should know what to do and how to do it, have the right tools to do it, and be able to measure the improvement of the process and the current level of achievement. Institutions should focus on process improvement at all levels through problem-solving processes and followership aimed at assuring that the goals of the customer are attained.

Again, an integrated framework is necessary where all eight supportive dimensions operate synergistically within an institution, and in support of the six primary dimensions discussed above. Without these dimensions, institutions will not be able to transform fully to the TQM philosophy.

5. Conclusions

The success of any TQM approach critically depends upon the commitment of top management, who must be, and must be seen, to be involved. Top management must establish unity of purpose and direction. They must create and maintain the internal environment in which people can become fully involved in achieving an institution's objectives. They must also be visibly involved in TQM transformation (Oschman 2004).

The commitment to TQM, once made, is binding unless an institution is prepared to see its reputation suffer and staff morale decline. Commitment implies considerable resourcing in the short term. The costs of training, facilitation, staff time and monitoring performance are considerable before the benefits arising from total quality are achieved.

A well-designed strategic plan contributes to directing all activities towards achieving an institution's mission, goals and objectives. This would include changing the institutional structure, from the mechanistic charts and boxes of command reminiscent of the military, towards an informal, organic institution with a flat, self-focusing team and involvement of people across functions.

The self-assessment procedure should be included in an institution's strategic planning to ensure that it retains its centrality. Progress should be fed back through self-assessment on an ongoing basis to drive the TQM programme forward.

Involvement, training and empowerment of employees are essential, as well as the recognition that they are the primary source of a competitive advantage. A change in the TQM philosophy affects the working life of people and as such can create resistance to change. Resistance to change must be translated to positive feedback that can direct the development process to establish a new culture.

A TQM approach is top down through line management in a quality council and quality task groups, and bottom-up through quality teams. Communication of the success of quality programmes and of progress is vital. Finding ways to disseminate information and to obtain feedback is a high priority.

Continuous improvement tools must be fit-for-purpose and must be understood by management.

A desired result is achieved more efficiently when related resources and activities are managed as a process. Fostering a holistic systems approach to total quality is therefore crucial in order to integrate quality processes successfully throughout the entire institution.

Institutions, no matter which sector they belong to, all depend on their customers and must therefore understand current and future customer needs, meet customer requirements and strive to exceed customer expectations. A customer-orientated culture must be developed in which the needs of existing and potential customers are satisfied. Achievement of total quality is important, not only in respect of goods and services, but also regarding time, place, processes, people, safety, information, measurement and the environment.

These conclusions are, in effect, signposts for those institutions wishing to implement TQM successfully in search of excellence in the provision of public services.

References

Addey, J. 2001. Quality management system design: A visionary approach. *Total Quality Management* 12 (7 and 8): 849–54.

Balbastre, F. and M. Moreno-Luzón. 2003. Self-assessment application and learning in organisations: A special reference to the ontological dimension. *Total Quality Management and Business Excellence* 14 (3): 367–88.

Behara, R. S., G. F. Fontenot and A. B. Gresham. 2002. Customer process approach to building loyalty. *Total Quality Management* 13 (5): 603–14.

Bigelow, M. 2002. How to achieve operational excellence. *Quality Progress* 35 (10): 70–5.

Billich, F. and A. A.Neto. 2000. Total quality management: Quality macro-function model for banks. *Total Quality Management* 11 (1): 5–15.

Capezio, P. and D. Morehouse. 1993. Take the mystery out of TQM. *Total Quality Management.* New York: Book-mart Press.

Carpinetti, L. R. C. and R. A. Martins. 2001. Continuous improvement strategies and production competitive criteria: Some findings in Brazilian industries. *Total Quality Management* 12 (3): 281–91.

Cascella, V. 2002. Effective strategic planning. *Quality Progress* 35 (11): 62–7.

Claver, E., J. L. Gascó, J. Llopis and R. Gonzlez. 2001. The strategic process of a cultural change to implement total quality management: A case study. *Total Quality Management* 12 (4): 469–82.

Collier, J. and R. Esteman. 2000. Systematic leadership: Ethical and effective. *The Leadership and Organization Development Journal* 21:207–15.

Crosby, P. B. 1979. *Quality is free*. New York: McGraw-Hill.

Dale, B. G. 2003. *Managing quality.* 4th ed. Hertfordshire: Prentice Hall.

Dayton, N. A. 2001. Total Quality Management critical success factors, a comparison: The UK versus the USA. *Total Quality Management* 12 (3): 293–8.

Dean, A. and M. Terziovski. 2001. Quality practices and customer/supplier management in Australia service organizations. *Total Quality Management* 12 (5): 611–21.

Delport, J. June 2000. *Die verband tussen enkele organisatoriese veranderlikes en eienaarskap van werkers.* Pretoria: University of Pretoria.

Deming, W. E. 1988. *Out of the crisis*. Cambridge, MA: Massachusetts Institute of Technology.

Dervitsiotis, K. N. 2003. The pursuit of sustainable business excellence: Guiding transformation for effective organisational change. *Total Quality Management and Business Excellence* 14 (3): 251–67.

De Swardt, J. B. 1995. *Wenplan vir die topsakeman.* Cape Town: Tafelberg.

Eng, Q. and S. M. Yusof. 2003. A survey of TQM practices in the Malaysian electrical and electronic industry. *Total Quality Management and Business Excellence* 14 (1): 63–77.

Evans, J. R. and J. W. Dean. 2003. *Total Quality Management, organisation and strategy.* United States: Thomson Learning.

Feigenbaum, A. V. 1986. *Total quality control.* 3rd ed. New York: McGraw-Hill.

Garcia-Lorenzo, A. and J. C. Prado. 2003. Employee participation systems in Spain: Past, present and future. *Total Quality Management and Business Excellence* 14 (1): 15–24.

George, S. and G. Weimerskirch. 1998. *Total Quality Management.* New York: John Wiley and Sons, Inc.

Geralis, M. and M. Terziovski. 2003. A quantitative analysis of the relationship between empowerment practices and service quality outcomes. *Total Quality Management and Business Excellence* 14 (1): 45–62.

Ghobadian, A., D. Gallear, H. Woo and J. Liu. 1998. *Total Quality Management – impact, introduction and integration strategies*. London: The Chartered Institute of Management Accounts.

Husain, N., M. Abdullah, F. Idris and R. M. Sagir. 2001. The Malaysian total performance excellence model: A conceptual framework. *Total Quality Management* 12 (7 and 8): 926–31.

Ishikawa, K. 1985. *What is total quality control? The Japanese way.* Englewood Cliffs, NJ: Prentice-Hall Inc.

Juran, J. M. 1988. *Juran's quality control handbook.* 4th ed. New York: McGraw-Hill Book Co.

Kanji, G. K. 2001. Forces of excellence in Kanji's business excellence model. *Total Quality Management* 12 (2): 259–72.

——. 2002. Performance measurement system. *Total Quality Management* 13 (5): 715–25.

Kanji, G. P. and P. Moura. 2003. Sustaining healthcare excellence through performance measurement. *Total Quality Management and Business Excellence* 14 (3): 269–89.

Kanter, R. M. 1992. *The change masters: Corporate entrepreneurs at work.* London: George Allen and Unwin.

Karapetrovic, S. and J. Jonker. 2003. Integration of standardized management systems: Searching for a recipe and ingredients. *Total Quality Management and Business Excellence* 14 (4): 451–9.

Katzenbach, J. R. and D. K. Smith. 1993. *The wisdom of teams*. Boston: Harvard.

Kreitner, R. and A. Kinicki. 1998. *Organizational behaviour.* Massachusetts: Irwin/McGraw-Hill.

Kueng, P. 2000. Process performance measurement system: A tool to support process-based organisations. *Total Quality Management* 11 (1): 67–85.

Lindsay, W. M. and J. A. Petrick. 1998. *Total quality and organisation development.* Florida: St. Lucie Press.

London, C. 2002. Strategic planning for business excellence. *Quality Progress* 35 (8): 26–33.

Lycke, L. 2003. Team development when implementing TPM. *Total Quality Management* 14 (2): 205–13.

Mani, T. P., N. Murugan and C. Rajendran. 2003. TQM is a must for success, but not sufficient for survival: A conceptual framework as contemplated in ancient Tamil literature in India. *Total Quality Management and Business Excellence* 14 (4): 395–405.

Mathews, B. P., T. K. Ueno, M. Repka, Z. L. Pereira and G. Silva. 2001. Quality training: Needs and evaluation – findings from a European survey. *Total Quality Management* 12 (4): 483–90.

Mellahi, K. and F. Eyuboglu. 2001. Critical factors for successful Total Quality Management implementation in Turkey: Evidence from the banking sector. *Total Quality Management* 12 (6): 745–56.

Nel, P. S., P. D. Gerber, P. S. van Dyk, G. D. Haasbroek, H. B. Schultz and T. Sono. 2001. *Human resource management*. Cape Town: National Bookprinters.

Oakland, J. S. 2000. *Total Quality Management*. Great Britain: Genesis Typesetting.

Oakland, J. S. and S. Oakland. 2001. Current people management activities in world-class organisations. *Total Quality Management*, 12 (6): 771–88.

Oschman, J. J. 2002. Kwaliteitbestuur in die Toetsvlieg- en Ontwikkelingsentrum in die Suid-Afrikaanse Lugmag. Pretoria: University of South Africa.

Oschman, J. J. 2004. A framework for the implementation of total quality management in the South African Air Force. Pretoria: University of South Africa.

Parzinger, M. J. and R. Nath. 2000. A study of the relationships between Total Quality Management implementation factors and software quality. *Total Quality Management* 11 (3): 353–71.

Pearce, J. A. and R. B. Robinson. 2000. *Strategic management: Formulation, implementation, and control.* 7th ed. New York: McGraw-Hill International Editions.

Pun, K. 2001. Cultural influences on Total Quality Management adoption in Chinese enterprises: A empirical study. *Total Quality Management* 12 (3): 323–42.

——. 2002. Developing of an integrated Total Quality Management and performance measurement system for self-assessment: A method. *Total Quality Management* 13 (6): 759–77.

Pun, K. and I. Hui. 2002. Integrating the safety dimension into quality management systems: A process model. *Total Quality Management* 13 (3): 373–91.

Pun, K., K. S. Chin and R. Gill. 2001. Determinants of employee involvement practices in manufacturing enterprises. *Total Quality Management* 12 (1): 93–109.

Pycraft, M., H. Singh and K. Phihlela. 2000. *Operations management.* Pretoria: Pearson Education.

Rao, A., L. P. Carr, I. Dambolena, R. J. Kopp, J. Martin, F. Rafii and P. F. Schlesinger. 1996. *Total Quality Management.* New York: John Wiley and Sons.

Reeves, C. A. and D. A. Bednar. 1994. Defining quality: Alternatives and implications. *Academy of Management Review* 19 (3): 419–45.

Russel, S. 2000. ISO 9000:2000 and the EFQM excellence model: Competition or co-operation? *Total Quality Management,* 10 (4, 5 and 6): S657–S665.

Savolainen, T. 2000. Leadership strategies for gaining business excellence through Total Quality Management: A Finnish case study. *Total Quality Management* 11 (7): 211–26.

Seghezzi, H. D. 2001. Business excellence: What is to be done? *Total Quality Management* 12 (7and8): 861–6.

Stahl, M. J. 1995. *Management: Total quality in a global environment*. University of Tennessee: Blackwell Business.

Stamatis, D. H. 1996. *Total quality service: Principles, practices and implementation*. Florida: St Lucie Press.

Steenkamp, R. J. 2001. *Basics of Total Quality Management*. Pretoria: University of South Africa.

Sureshchandar, G. S., C. Rajendran and T. J. Kamalanabhan. 2002. The relationship between management's perception of total quality service and customer perception's of service quality. *Total Quality Management* 13 (1): 69–88.

Swift, J. A., J. E. Ross and V. K. Omachonu. 1998. *Principles of total quality management.* Florida: St. Lucie Press.

van Zyl, E. 2002. *SANDF Bulletin: For educational technology.* Jan–Jun 2002:17–22.

Vavra, T. G. 2002. ISO 9001:2000 and customer satisfaction. *Quality Progress* 35 (5): 69–75.

Warner, R. 1999. Teamwork not what it should be. *Management Today* 15 (5): 22–3.

——. 2000. Top teams. *Management Today* 16 (1): 38–9.

Wilton, J. T. and L. R. P. Reavill. 1995. *Should a change programme be 'culture' or 'protocol' driven.* London: Northampton Square.

Wood, M. 1997. The notion of the customer in total quality management. *Total Quality Management* 8 (4): 181–91.

Yong, J. and A. Wilkinson, A. 2002. The long and winding road: The evolution of quality management. *Total Quality Management* 13 (1): 101–21.