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KANDUNGAN

KATA-KATA ALUAN PENAUNG

Assalamualaikum Warahmatullahi Wabarakatuh

Tahniah diucapkan kepada Jawatankuasa Jurnal Akademik UiTM Cawangan Kedah khasnya dan warga akademik UiTM Cawangan Kedah amnya kerana telah berjaya menerbitkan penerbitan pertama WAHANA AKADEMIK iaitu Jurnal Akademik UiTM Cawangan Kedah. Usaha ini adalah sejajar dengan cabaran era globalisasi yang memerlukan keupayaan penguasaan dalam pelbagai bidang ilmu. Masyarakat yang tidak mempunyai ilmu akan terus ketinggalan dan terkebelakang dalam segala segi. Sebagai sebuah universiti, para pensyarah dapat memainkan peranan yang penting dalam menghadapi cabaran ini kerana ilmu yang diturunkan dalam bentuk penulisan dapat mengubah nasib sesebuah masyarakat. Oleh itu para pensyarah perlulah berusaha untuk melengkapkan diri dengan meningkatkan pengetahuan tentang bidang masing-masing serta komited dengan penulisan dan penerbitan.

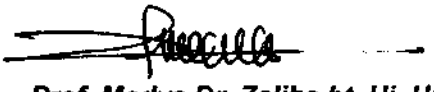
Saya amat berharap kewujudan jurnal WAHANA AKADEMIK akan menjadi pemacu kepada percambahan dan pertumbuhan ilmu serta menjadi saluran utama kepada penerbitan pensyarah UiTM khasnya UiTM Cawangan Kedah.

Saya juga berharap penerbitan jurnal ini dapat dimanafaatkan oleh semua warga kampus UiTM khasnya dan masyarakat amnya dalam usaha untuk memperbanyakkan lagi khazanah ilmu.

Akhir kata, saya sekali lagi mengucapkan setinggi-tinggi penghargaan dan syabas di atas kejayaan menerbitkan WAHANA AKADEMIK.

Sekian. Terima kasih.

Wassalam.



Prof. Madya Dr. Zaliha bt. Hj. Hussin
Pengarah Kampus
Universiti Teknologi MARA Cawangan Kedah
Kampus Sungai Petani

KATA-KATA ALUAN PENASIHAT

Assalamualaikum Warahmatullahi Wabarakatuh

Saya mengambil kesempatan ini untuk merakamkan ucapan terima kasih kepada Jawatankuasa Jurnal Akademik Universiti Teknologi MARA Cawangan Kedah di atas usaha menerbitkan WAHANA AKADEMIK. Penerbitan jurnal ini adalah selaras dengan aspirasi negara yang mahukan setiap rakyatnya mempunyai ilmu pengetahuan.

Kegiatan penulisan dalam pembentukan profesyen seorang pensyarah di institusi pengajian tinggi adalah sangat penting. Ini adalah kerana dengan melibatkan diri di dalam penulisan akademik, pensyarah dapat menunjukkan bahawa ia sentiasa berusaha untuk melengkapkan diri dan berkemampuan untuk meningkatkan ilmu pengetahuan sesuai dengan tarafnya sebagai seorang ahli akademik. Walau pun sibuk dengan beban pengajaran yang banyak, tetapi pensyarah tidak wajar menjadikannya sebagai alasan untuk tidak terlibat dalam bidang penulisan. Oleh itu, saya menyeru agar pensyarah sekelian berusaha menjadikan penulisan sebagai satu budaya serta memainkan peranan dengan sebaik-baiknya bagi menyempurnakan kegiatan yang berfaedah ini.

Saya juga berharap agar pensyarah menggunakan peluang untuk mendalami ilmu, mengemukakan pendapat dan seterusnya menyebarkan pengetahuan melalui ruang yang disediakan oleh WAHANA AKADEMIK ini dengan sebaik mungkin. Sesungguhnya penerbitan jurnal ini merupakan satu mekanisma yang dapat mempertingkatkan status akademik pensyarah UiTM Cawangan Kedah di mata masyarakat.

Sekian. Semoga segala usaha dan sumbangan bakti Jawatankuasa tuan/puan semua diberkati Allah S.W.T.

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Zauyah bt. Abd. Razak
Timbalan Pengarah Kampus
Bahagian Hal Ehwal Akademik
Universiti Teknologi MARA Cawangan Kedah
Kampus Sungai Petani

DARI KETUA PENYUNTING

Assalamualaikum Warahmatullahi Wabarakatuh

Syukur kepada Allah kerana penerbitan pertama 'WAHANA AKADEMIK,' iaitu jurnal akademik pertama Universiti Teknologi MARA Cawangan Kedah akhirnya dapat diterbitkan. Usaha untuk menerbitkan jurnal ini lahir daripada kesedaran bahawa budaya penulisan perlu dipupuk di kalangan ahli akademik. 'Wahana' yang bermakna alat untuk melahirkan atau menyampaikan fikiran atau pendapat diharap akan dapat dimanafaatkan oleh ahli akademik dalam usaha untuk menyalur dan berkongsi maklumat mengenai perkembangan pelbagai bidang akademik kepada pembaca.

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Wan Faizah bt. Wan Abdullah

KEY SUCCESS FACTORS OF TQM ORGANIZATIONS: A REVIEW OF THE LITERATURE

MOHAMMAD ZAKI AYOB
FATIMAH MOHD SAMAN

Pensyarah Pengurusan
Universiti Teknologi MARA Cawangan Kedah
Kampus Sungai Petani
E-mel: fams58@tm.net.my

ABSTRACT

The use of Total Quality Management (TQM) philosophy has increased over the years. TQM organizations have been found to out-perform the non-TQM organizations on several measures of organizational performance and employee satisfaction. Although some TQM programs may fail due to various reasons, the benefits such as better understanding of customers and improved employee performance are reasons for continued interest in TQM. This article attempts to review the literature on TQM. It seeks to provide the different perspectives on quality, defines TQM, traces its origin, and highlights the quality 'gurus'. At the end, the key elements contributing to the successful implementation of TQM are discussed.

Key words: ***Benchmarking, Continuous Improvement, Empowerment, Leadership, Motivation, Recognition, Reward, Total Quality Control (TQC), Total Quality***

INTRODUCTION

Quality is the number one concern of management worldwide, according to a survey by Organizational Dynamics Inc. (ODI). Nearly two-thirds of respondents comprising senior managers from Fortune Global 500 companies indicated that quality is the key determinant of their companies' success. Ninety-two percent reported that their companies are implementing quality improvement efforts (Salazar,1995). Despite this growing number, however, approximately seventy percent of TQM implementations have met with limited success (Grayson, 1993). In many of these companies, the TQM programs lost momentum because disagreements over goals and implementation procedures surfaced, upper-level managers turned their attention to other priorities, and employees became increasingly sceptical about organizational commitment to the programs. In other companies, quality programs clashed resoundingly with other strategic objectives.

TQM, although universal in applicability, needs to be customized and tailored to meet the individual requirements of each unique environment. One cause for

failure is the tendency to copy the quality management systems of successful companies. Many companies failed in their TQM programs because they had embraced TQM as a solution for all corporate problems (Salazar, 1995). It has recently been found that companies are now beginning to understand that quality is not just a science, but also an art .

PERSPECTIVES ON QUALITY

The human desire and concern for quality dates back centuries ago. The quality of the first tools, the arrowhead, plough and hoe, have very much affected prehistoric man's catch and harvest. The human concern with money is even younger than quality itself (Kondo, 1994). Webster's New Dictionary defines quality as *'that which makes a thing what it is; nature; kind or degree of goodness or worth; attribute; degree of excellence.'* The Oxford Dictionary defines quality as '*degree of excellence.*' Other descriptions of quality suggested by writers are:

- Conformance to requirement (Crosby, 1986)
- A predictable degree of uniformity and dependability, at low cost and suited to the market (Deming, 1982)
- An effective system for integrating quality improvement efforts of the various groups of the organization, so as to provide products and services at levels which allow customer satisfaction (Feigenbaum, 1961)
- Fitness for purpose of use (Juran, 1988)
- Meeting customer requirements (Oakland, 1989)
- Consistent conformance to customers' expectations (Anderson,1989).

A general definition of quality used in industry is *'fitness for use.'* The American Society for Quality and Reliability defines quality as *'the totality of features and characteristics of a product or service that bear on its ability to satisfy given needs.'*

Quality is important, but it must be placed in perspective. We see that in most instances, quality is object-related- *'this object is of good quality'*. It meets specifications. In fewer instances, quality is defined as being organizational in nature, affecting everything that we do. In yet other instances, quality is related to the customers' needs- *'We should not provide questionable quality to external or internal customers'*.

TOTAL QUALITY MANAGEMENT (TQM) DEFINED

TQM is an amalgamation of various policies, concepts, and procedures. It is an umbrella for several fundamental business concepts. TQM refers to a management process directed at establishing organized continuous improvement activities, involving everyone in the organization in a totally integrated effort towards improving performance at every level (Department of Defense, 1989).

TQM is mostly a style of leadership that creates an organizational culture which helps achieve the goal of creating the highest possible quality products and

where, T is the number of observations, k is the number of lags and σ^2 is variance.

The system of equation 7 can be rewritten in the first difference and in the reduced form as follows:

$$\Delta Y_t = \mu + \Gamma_1 \Delta Y_{t-1} + \ldots + \Gamma_{k-1} \Delta_{t-k-1} + \prod Y_{t-k} + e_t \qquad (9)$$

where, $\Gamma_1 = -[I - \Pi_1 - \ldots - \Pi_i]$, $(i = 1, \ldots, k-1)$
and, $\Pi = -[I - \Pi_1 - \ldots - \Pi_k]$

Equation 9 is in the form of the traditional VAR model of Sim's (1980) with first difference except for the ΠY_{t-k} term. The matrix Π is called the long-run impact matrix. This term determines whether or not, and to what extent, the system of equation is cointegrated. The number of cointegrating vectors is determined by the rank of the Π matrix. If the value of the matrix Π is *r*, then there are *r* cointegrating relationships among the elements of Y_t. When r = 0, there is no long run relationship among the price series. In the case of 0 < rank (Π) = r<p, where r is the rank of the matrix and p is the number of variables in the system, there exist one or more cointegrating relationships among the variables. Johansen's procedure is used to determine the rank of the Π matrix by testing whether the eigenvalues of Π, the estimated of Π, are significantly different from zero. If the matrix Π is full rank, then any linear combination of Y_t is stationary. If the rank (Π) = 0, the matrix Π is null matrix, then equation 9 collapses on the traditional VAR model with first differences.

To test the null hypothesis that is at most r cointegrating vectors in a set of p variables, first regress ΔY_t on Y_{t-1}, Y_{t-2}, ..., Y_{t-k+1} and output the residuals, D_t. Each t and D has an n element. Second, regress Y_{t-k} on ΔY_{t-1}, Y_{t-2}, ..., Y_{t-k+1} and output the residuals, L_t. Each t and L_t has n element. Then compute squares of the canonical correlation between the two residuals, denoting them as $Q^2i(\ Q^2_1 > Q^2_2 > \ldots > Q^2_i\ )$. The likelihood-ratio test of the null hypothesis is obtained by the trace test defined as:

$$\textit{Trace Tests} = -T \sum_{i=r+1}^{p} \ln(1 - Q_i^2) \qquad (10)$$

where, *T* is the number of time period available in the data. The null hypothesis for trace test is that whether there are *r* or less cointegrating vectors. The null of r = 0 is tested against the general hypothesis of $r \leq 1, \ldots, r \leq p$. Similarly, we can also use the maximal eigenvalue test. The test is that there are *r*-cointegrating vectors in a set of p variables against r+1. In other words, the null of r = 0 is tested against the specific hypothesis of r = 1, ..., r = p. It is defined as:

$$\textit{Maximal Eigenvalue Tests} = -T \ln(1 - Q^2_{r+1}) \qquad (11)$$

The test statistics of the trace and maximum eigenvalues may be compared with the critical values provided by Osterwald-Lenum (1992).

CONCLUDING REMARKS

In the analysis of time series data, a prerequisite for a set of series to be cointegrated is that they should be integrated of the same order. Thus, the first step in the cointegration analysis is to determine the order of integration of each price series. Several methods are available to determine the order of integration of a series. Examples are Dickey and Fuller (1979,1981), Dickey and Pantula (1987), Sim's Bayesian tests (Sim, 1988), and Phillip and Perron (1988). In this paper, both Augmented Dickey-Fuller (ADF) (Said and Dickey, 1984) and Phillip- Perron (PP) (Phillip and Perron, 1988) tests on the logarithms of each price series to determine the order of integration were utilised. For each of these tests, two equations were estimated, one with constant and no trend and the second with constant and time trend. Then, Johansen-Juselius multivariate cointegration test was used to test for cointegration.

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services. It is a process of creating an environment in which management and workers strive to create constantly improving quality. TQM does not mean an organization must seek perfection in all its products and services. Rather, it means achieving the highest quality of service and products possible, under the circumstances for that organization (Williams, 1994).

Dr Marshall Sashkin and Dr Kenneth J. Kiser (1990) based their definition of TQM on three basic concepts: tools, training, and techniques. In their words, *'TQM means that the organization's culture is defined by and supports the constant attainment of customer satisfaction through an integrated system of tools, techniques, and training. This involves the continuous improvement of organizational processes, resulting in high quality products and services.'* Kanji (1990) defined TQM in a cumulative way, *'quality is to satisfy customer requirements continually; total quality is to achieve quality at low cost; and quality management is to obtain total quality by involving everyone's daily commitment'*. He stressed that the need to meet the requirements of customers is essential not only between organizations, but also internally. Oakland (1990) said the TQM concept is basically simple. Each part of the organization has customers, within or without. The need to identify what the customers' requirements are, and then to meet them, forms the score of a total quality approach.

THE ORIGINS OF TQM AND THE QUALITY *'GURUS'*

The origins of TQM go back to the early days of Japan's recovery from the Second World War. It was during this era of the early 1940s that individuals like W. Edward Deming and Joseph M. Juran began to spread the gospel of processes control, quality management, and statistical quality control outside the boundaries of US business. These concepts had been developed in the United States, but it was the Japanese who were the first people to embrace them and put them into action. A great deal of credit has been given to the innate Japanese culture for allowing their industry to subscribe so readily to these methods. The basic precepts of TQM which correlate with the innate cultural qualities of the Japanese people are:

- top-down managerial commitment, implementation, and support of TQM
- training and support of every member of the organization to a commitment to get the job done right the first time.
- a management perception of their corporate processes as a holistically interacting system
- a structured and rational method of measuring quality and the process variables associated with quality (Honeycutt,1993).

W. Edward Deming's late 1940's work on the *'Elementary Principles of Statistical Quality Control,'* followed much later by *'Out of Crisis'* in 1986, set out fourteen quality guidelines with three key ingredients: continuous improvement, constancy of purpose, and profound knowledge. The most challenging concept is perhaps *'profound knowledge'* and it too, has three components:

(a) A business is a system that exists for a purpose. Its product or service begins with a design to meet that purpose and includes every step required to deliver the product to a completely satisfied customer.

(b) The belief that it is best to eliminate all waste by preventing mistakes rather than relying on an inspector to separate good from bad after the fact. It is astounding to realize that twenty to forty percent of plant expenditures go to finding and fixing mistakes.

(c) From the beginning, statistical quality control is important, but it should not be considered merely a tool to achieve higher goals.

Philip Crosby created the zero defect movement at Martin Marietta in the 1960s, when he popularized the concept *'Do it Right the First Time.'* During 1970's he wrote, *'Quality is Free'* (1979).

Joseph Juran's *'Handbook of Quality Control'* (1954) led to *'The Juran Trilogy'* of quality planning, quality control, and quality improvement. For Juran, a quality program requires that the top people be in charge, people be trained to manage for quality and that improvements to quality be very rapid.

Kaoru Ishikawa, familiar in the U.S. from his book, *'What is Total Quality Control (TQC)?'* developed many innovations, such as *'Quality Control Circles (QCC)'* in the early 1960s.

ELEMENTS OF TQM

The elements of TQM philosophy include: employee empowerment and involvement, cross-training for broader use of each employee, management determination and commitment to quality concepts, clear articulation of goals, objectives and expectations, assessment of performance, identification of impediments, thinking outside-of-the-box, accountability and benchmarking against the best-in-class using relevant metrics, and continuous improvement of processes and re-engineering (Mc Millan & Mahoney, 1994).

The quality *'gurus'* seem to suggest the following elements to be in TQM concept:

- upper management commitment to place quality as a top priority
- striving continually to improve employee capabilities and work processes
- involvement of all organizational members in cooperative team-based efforts to achieve quality improvement efforts
- a focus on quality throughout all phases of the design, production and delivery of a product/service, i.e. not just the end product.
- attempts to involve external suppliers and customers involved in TQM efforts
- frequent use of scientific and problem-solving techniques, including statistical

process control
- the institution of leadership practices oriented towards TQM values and vision, and the development of a quality culture (Waldman, 1994).

Saraph et. al. (1989) identified eight separate factors of TQM, and they include:

- the role of management leadership and quality policy
- the role of the quality department
- quality-related training
- product or service design
- supplier quality management
- (production) process management
- quality data and reporting, and employee relations.

Other writers such as de Kierit and Finlow-Bates (1992) highlight five aspects which are essential to the success of the TQM program:

- Commitment: with an emphasis on senior management action
- Organization: the building of a well-organized TQM implementation structure is not only vital, but demonstrates seriousness and determination
- Training: for employees so that they can understand the principles of TQM, and for senior managers in order that continuous development takes place
- Systems: useful as a means of identifying priorities for action
- Projects: quoting Juran, *'Improvement occurs project by project'*

The authors added a further six elements of TQM implementation to the matrix: quality assurance certification, customers, fully documented work instructions, statistical process control, suppliers, and performance indicators.

According to the TQM International Consultancy Handbook, TQM is composed of ten basic principles:

- agree to customer requirements;
- understand and improve customer-supplier chains;
- do the right things;
- do things right the first time;
- measure for success;
- continuous improvements is the goal;
- management must lead;
- training is essential;
- communicate more effectively.

Implementing TQM successfully requires that a company establishes competence, intellectually and emotionally, in its employees. Three essential

dimensions the management system must build into any implementation process are: clear vision, clear responsibilities, and clear measurement (Senecal, 1994).

KEY SUCCESS FACTOR 1 - LEADERSHIP

Total quality management programs emphasize the importance of top management acting as the main driver of TQM activities. TQM is a culture in the sense that it tries to change the values of the organization and its employees as well as their behaviour in multiple areas. Top management support is necessary to ensure that the right priorities are set and that commitment to the principles of TQM exists throughout the organization.

According to Deming, most quality problems are caused by management and the systems they create and operate. Estimates of the proportion of quality problems that can be traced to worker performance problems range from twenty-five percent to less than ten percent. Employees are seen as having good ideas on how to improve quality and as wanting to do a good job. In TQM programs, they are asked to contribute their ideas and are often given the responsibility for monitoring quality. Managers, on the other hand, are seen as being responsible for the management systems and production systems in organizations. They are asked to improve these so that the organization produces quality products and services.

Management is the key which allows quality improvement to occur in organizations. The Economist Intelligence Unit report, *'The Quest for Quality'* notes, *'Among indigenous Asian companies, the involvement of senior management, particularly the chief executive officer, can often determine whether the program gets off the ground at all, and certainly whether it survives beyond the initial phase. Whoever leads the process often requires the mandate of the CEO to cut across rigorously defended departmental boundaries (1996)."*

KEY SUCCESS FACTOR 2 - EMPLOYEE EMPOWERMENT

Teamwork and empowerment are important everywhere in today's quality-driven companies, and being repeatedly cited as a key to TQM success. Two major reasons for the importance of empowerment are:

(a) to respond to increased competition in its external environment- the expectations of improved customer service and quality (Smith, 1990), the need for enhanced organizational effectiveness and productivity and innovation (Ripley, 1992).

(b) to meet increasing expectations of the workforce.

Workers seek the opportunity to make use of their abilities, to exercise influence over changes in work organization and to be involved in their work. These expectations, together with other factors can impact on workers' commitment to the organization.

Empowerment in the workplace was developed and practised in the 50s and 60s and recent forces in the business community have advocated empowerment as a promising solution. It is possible to create an environment where employees willingly take on responsibilities. Guidelines for empowering employees are:

(a) encourage employee participation and involvement
(b) accept employees as fully functioning people rather than as apprentices
(c) praise and recognize employees
(d) inform employees about what is really happening in the company
(e) create an environment of safety
(f) be enthusiastic toward employees and their growth and
(g) renew your commitment to your employees (Rigsbee & Richard, 1992).

There are a wide range of definitions of empowerment in the management literature:

- giving people the authority and autonomy to do their jobs, or being given a job to do and the tools with which to carry out that job (European Foundation for Quality management, 1994).
- encouraging people to make decisions and initiate actions with less control from their manager; the freedom to fail; taking personal responsibility for their own quality assurance and the continuous improvement of work processes (Wilkinson, Marchington & Dale, 1993).
- management handing responsibility down to people *'who know what to do with it'* or the process of extending to the employee nearest to the customer *'the education and authority necessary to create extraordinary service while preserving profitability'*(William, 1993).
- delegating authority (Stewart, 1994).
- taking the front line seriously (Peters, 1987).

Empowerment is not so much concerned with workers being given power but rather helping people to channel the power they already have towards qualitative and productive ends. Management may achieve more control over the workforce by sharing or reducing their own power base, and by encouraging workers to take more responsibility for those aspects of their work which are largely already in their control (Crosby, 1986).

Empowerment is simply equated with employee participation (Conger and Kanungo, 1988). Leana (1987) makes an important distinction between *'delegation'* and *'participation,'* defining participation as joint decision making between superior and subordinate, while delegation as a process whereby a manager transfers decision-making authority to a subordinate.

Delegation, in these terms, could be regarded as more empowering than participation. Managers will only use delegation under a less risky set of

circumstances than they will use participation. Therefore, managers may use the more empowering process of delegation under relatively restricted circumstances.

Employee empowerment should be reserved for those examples of involvement which genuinely and substantially increase the influence of individual employer over the way in which their work is carried out (Fenton O'Creevy, 1993). Tymon (1988) defines the concept of empowerment by identifying three major perspectives: structural, leadership, and individual or self-empowerment. The structural elements of empowerment include information support and resources; the leadership perspective is concerned with making people feel competent and significant, and that they have *'exciting'* work to do as part of a work-community through the management of attention, meaning, trust and self; while the self-empowerment perspective focuses on *'intrapersonal processes through which individuals empower themselves.'*

Any manager concerned with empowerment needs to have an awareness of the individual perspective, together with its wider organizational, social, cultural and political contexts. It is, perhaps, the need for this breadth of view and intervention which makes it difficult for some managers to move beyond the rhetoric of empowerment in organizations to make it a reality.

KEY SUCCESS FACTOR 3 – TRAINING

To be successful in TQM, everyone in the organization requires training in order to understand the need for quality improvement. According to Huckett (1994), installing total quality management into a company requires three things: education, training and development. Education creates an understanding of total quality management and a company-wide awareness of the opportunities or quality improvement in every part of the business. He states that training in total quality should be different from any other training in two particular respects:

(a) It should be cascaded down from top management. In fact, it may be virtually impossible to bring about the cultural changes required in total quality management unless management leads the way. This need for leadership means that the top management team receives training together.

(b) Training is then given to the next level of management and cascaded down to every employee.

The aim is to try to change the culture -- the way people think, feel and act. It is essential for everyone in an organizational work group to be trained together at the same time. The traditional approach to training is to take individuals from different departments and train a mixed group. This may not be as effective as training each work group together, starting at the top. Employees at all levels of the organization must understand the concepts of TQM, the reasons for its

implementation and the benefits to employees. Hence, total quality training should be cascaded down from senior management by training teams and workgroups to enhance the contribution of every employee.

KEY SUCCESS FACTOR 4 - RECOGNITION AND REWARD

One concept crucial to TQM is to reward, not penalize employees for risk-taking. Although recognition seems basic, it is surprising how many teams or individuals who have achieved quality improvements receive no recognition. Quality is an attempt to create or change behaviour sets, yet workers who perform good work go unrecognized, and employees who perform poorly escape disciplinary action. Every team or individual should be given an opportunity to report successes and should receive at least a letter from the CEO thanking them for their effort. Award pins, certificates, mugs, and the likes are rewards too, but nothing takes the place of a pat on the back for a job well done. It provides motivation to try again.

Appleton Papers in West Carrollton, Ohio, which began its quality-improvement process in 1988, made recognition gifts personal in nature and something that the employees would not buy for themselves. The company encourages managers to use the gifts as surprise rewards for good work, as well as incentives for special achievement. Appleton discovered that morale has improved because of the recognition process (Caudron, 1993).

Before embarking on any change program, managers should consider, among other things, how the change will benefit the employees, if meaningful incentives are in place, and what management is seeking to gain (Alberts, 1993).

KEY SUCCESS FACTOR 5 - CONTINUOUS IMPROVEMENT

One basic tenet of TQM is that continuous improvement must be ingrained in the corporate culture. Even though many are aware that improved quality is an essential ingredient for success, they are not willing or ready to invest either the time or the significant resources that a TQM program typically requires. In the spirit of continuous improvement, it is better for an organization to make an incremental step toward quality than to maintain the status quo (Forbes, 1994). The more successful companies view quality as a long-term strategy and support it in many ways over the long term. The companies that have achieved successful cultural changes accept that the time frame for a cultural change is five to seven years. Therefore, considerable efforts should be made in second, third, and fourth round improvement projects. At the same time, considerable effort should be made in obtaining employees' acceptance of the continuous improvement concept so that they will view all subsequent improvement projects as part of their normal routines.

KEY SUCCESS FACTOR 6 - BENCHMARKING

Benchmarking, which is comparative measures of performance, plays a major role in achieving quality, but companies frequently overlook its motivational role. Many people are naturally competitive, so given a better performance by a

competitor, they will try harder to achieve specific performance targets, and benchmarking can provide these targets.

One national U.S. initiative to encourage quality improvement programs has been the Malcolm Baldridge National Quality Award, established in 1987. The award recognizes firms that have achieved excellence through adherence to the quality improvement process. Among the winners since 1988 are Motorola, Federal Express, Xerox Business Products and Systems Group, General Motors Cadillac Division and the Wallace Company. The award, named after the late Secretary of Commerce, is the highest honour of this type in the United States. Interest in quality has been spreading fast. Since the introduction of the Malcolm Baldridge Award, requests for applications quadrupled from 12,000 in 1988 to 51,000 in 1989, and again tripled to 180,000 in 1990 (Gehani, 1993).

Many organizations are not aware that the Malcolm Quality Award criteria can actually be a great starting place to set up a quality-driven management system. Companies that have done well with implementing a company-wide Baldrige system brought high-level management on board early. Many CEOs of Baldrige-winning companies have learned to benchmark themselves against world-class managers (Leach, 1994).

SUCCESS STORIES

The success stories of TQM are well known and they include such companies as Xerox, Allan-Bradley, Motorola, Marriot, Harley-Davidson, Ford, and Hewlett-Packard. These companies committed themselves wholeheartedly to TQM. They made fundamental changes in their management practices, philosophies and improved product quality and company performance. A survey conducted on TQM companies in the Pacific Northwest showed that the improvements resulting from TQM efforts are: increased awareness of customer needs, empowered employees, improved employee and company morale and involvement, and improved process control. Many companies boast improvements in reduced error rates, cycle times, defects, and costs. Overall, most organizations were satisfied with their program and results.

Motorola Inc. conducts the annual Total Customer Satisfaction Worldwide Team competition where teams from every sector of the firm address problems of quality improvement, production efficiency, profit improvement, and product innovation. With its quality program Motorola has profited with millions of dollars in savings, increased empowerment, and pride of workmanship among employees, and a loyal employee base (Brewer, 1992).

Another success story is Harley-Davidson which produces bikes of the highest quality and reliability. In 1994, the company made US$1.5 billion in sales and return on equity of 27.5%. Its idea of a healthy working relationship is embedded in five values that constitute a code of behaviour for everyone - tell the truth, be fair, keep your promises, respect the individual, and encourage intellectual

capacity. As Harley-Davidson was one of the first victories of the American quality movement, the company has become a foster child of TQM (Filipczak, 1996).

The case of a bank which took a limited step of empowering front-line employees resulting in major benefits when it implemented a new information system, is worth mentioning. The results showed that the opportunity to schedule training provided employees with enhanced feelings of empowerment and contributed to the success of the organizational transformation through increased employee motivation and satisfaction (Dran, Gisela, Leon & Victor, 1996).

The Singapore Airport Terminal Services (SATS) made significant contributions to Singapore Airlines when it successfully maintained a 47-year zero food poisoning assurance. It subsequently became the first flight kitchen to be awarded the ISO 9002 Certificate for production of in-flight meals (Zeph, Wee & Loh, 1997).

To summarize, TQM, as a customer-oriented quality approach, remains an accepted and important tool in efforts towards organizational improvements. Some favorable outcomes of TQM implementation are organization's improved attitude towards customers, improvement in quality, and increased employee participation in quality improvement. The elements in TQM highlighted in this article have been found to contribute towards the effectiveness or success of TQM organizations.

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