

# Total Quality Management; Insight

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## 1. Executive Summary

During the recent time the world of business has changed greatly. The people of different walks of life cannot be able to imagine that what is going to be the future picture if this change continues swiftly like this speed. Today there are very much competition in-between them and for that reason each and every business organization are trying to suggest competitively better services for their customers better than the competitors.

## 2. Introduction

Management systems are usually executed in response to current conditions. Such systems and the terms to explain them change with time and use in new contexts. To a great extent the current management literature, in education and other industries, focuses on systems that can be described under the umbrella term, Total Quality Management, or TQM. TQM contains a mix of unique ideas and those with historical antecedents.

Total Quality Management is a management system- a philosophy, set of tools, and organizational models. It is found by names other than Total Quality Management, including: the Deming Management Method; in the United States Total Quality Improvement and Total Quality Commitment; in Japan- Total Quality Control, Company-Wide Quality Control, and kaizen, which in Japanese means gradual, unending improvement, doing little things better, setting and achieving ever higher standards.

The components of TQM are a mix of ideas developed by three key theorists. Statistical thinking applied by W. Edwards Deming to the control of variation of work processes. He is best known for his fourteen points. J. M. Juran gave insight into managing for quality and describing the quality trilogy: quality planning, quality control, and quality improvement. Ways to motivate and organize for quality was developed by Philip B. Crosby . His less technical approach is dependent on the ideas of “zero defects” and “conformance to requirements”.

## 3. Historical Review

The history of quality control is unquestionably as old as industry itself. During the Middle Ages, quality was to a large extent controlled by the long periods of training required by the guilds. This training provided pride in workers for quality of a product.

The concept of specialization of labor was introduced during the Industrial Revolution. As a consequence, a worker no longer made the entire product, only a portion of it. This change brought about a decline in workmanship. Because most products manufactured during that early period were not complex, quality was not greatly affected. In fact, because productivity improved there was a shrink in cost, which resulted in lower customer expectations. As products became more complicated and jobs more specialized, it became essential to inspect products after manufacture.

In 1924, A statistical chart for the control of product variables was developed by W. A. Shewhart of Bell Telephone Laboratories. This chart is considered to be the start of statistical quality control.

In 1950, W. Edwards Deming, learned statistical quality control from Shewhart, gave a series of lectures on statistical methods to Japanese engineers and on quality responsibility to the CEOs of the largest

organizations in Japan. Joseph M. Juran further emphasized management's responsibility to achieve quality. The Japanese set the quality standards for the rest of the world to follow using these concepts.

The first quality control circles were formed for the purpose of quality improvement in 1960. By Japanese workers simple statistical techniques were learned and applied

Emphasis on quality sustained in the auto industry in the 1990s when the Saturn automobile ranked first in customer satisfaction (1996). ISO 9000 became the worldwide model for a quality management system(QMS). As the worldwide model for environmental management systems ISO 14000 was approved .

#### 4. Total Quality Management (TQM) defined

Total Quality Management (TQM) is an enhancement to the normal way of doing business. Only by altering the actions of management will the culture and actions of an entire organization be transformed. TQM is for the most part common sense. Analyzing the three words, we have

*Total* - Made up of the whole

*Quality*- Degree of excellence a product or service gives.

*Management*- Act, art, or manner of handling, controlling, directing, etc

TQM is defined as both a philosophy and a set of guiding principles that represent the basis of a continuously improving organization. It is the application of quantitative methods and human resources to get better all the processes within an organization and exceed customer needs now and in the future. TQM integrates fundamental management techniques, existing improvement efforts, and technical tools under a disciplined approach.

#### 5. TQM; Basic Concepts

While there are significant differences among the theorists and their approaches to implementation, they share basic concepts that are the foundation of TQM.

**5.1 Continuous Improvement of Quality.** TQM systems is improving the quality of the products and services provided by an organization. Such quality enhancement results in greater productivity and enhances the ability of an organization to remain vital, employ people, and serve customers. A focus on continuous quality enhancement helps an organization do things right.

**5.2 Central Focus on the Customer.** Also central to all TQM is a center on the customer, the internal and external recipients of an organization's products. Their needs define quality for the producer whose job it is to meet or exceed the customer's needs and expectations.

**5.3 Systematic Improvement of Operations.** All work occurs in processes that begin and end somewhere. Management is answerable for systems within an organization; therefore, managers, not employees, must shoulder blame when something goes wrong with the system.

TQM calls for studying work processes quantitatively, using individuals or teams, to find places that breakdowns or unnecessary complexities occur in processes, and then to identify solutions that prevent them in the future. Study of work processes helps to reduce costs while ensuring that quality is built into a service or product since quality cannot be inspected into it at the end of the processes.

**5.4 Open Work Environments.** Continuous quality improvement requires an atmosphere for innovation where suggestions for improvement are solicited and respected and where supervisors and managers are open to disagreement, conflict, and challenge. Activities for the improvement of work processes, especially when teams are involved, help to break down barriers that occur between departments or between supervisors and those supervised.

**5.5 Long- Term Thinking.** TQM is also characterized by long- term thinking which helps mold the future by understanding the consequences of current actions. Such thinking requires decision making that is based on data, both hard and soft, and related to real problems, not symptoms. It requires time. It shies away from quick fixes arrived at by discussion and intuition. Long- term thinking works best in organizations where managers plan to stay, and thus have a stake in the consequences of their decisions.

**5.6 Development of Human Resources.** Organizations that follow TQM principles are organized to help people do their jobs; they are seriously committed to employee learning and development. Such development begins with a thorough orientation to the organization, including its mission, values, and information about where the job fits into the organization. It involves educating people to perform to the quality standards of a specific job before requiring them to work independently.

TQM expects managers to respect the ability of well trained employees to know the work they do better than anyone, and therefore, to be the best at improving it. Human resource development includes providing the training to learn the communication, quantitative, and team- participation skills required in an open, quality improvement work environment. Development programs provide extensive education to help individuals keep up- to- date on their jobs and to prepare themselves for new responsibilities.

**5.7 Management Responsibility for TQM Leadership.** Managers need to lead the transformation of the organization to the new culture of continuous quality improvement. They must accept personal responsibility for continuous quality improvement and be dedicated to empowering others in the organization to accept personal responsibility for it, too. This approach taps the collective genius of the organization to identify and solve problems. The leader's focus is on policy, structure, and systems to sustain continuous quality improvement. Within this context, quality is the first among equals of the organization's functions. Quality is at the top of the agenda for every meeting, every communication. The leader's goal is to help people, things, and machines do a better job; the leader's role is that of facilitator, catalyst, and coach.

As previously stated, TQM requires a cultural change. Table I -I compares the previous state with the TQM state for typical quality elements. This change is substantial and will not be accomplished in a short period of time. Small organizations will be able to make the transformation much faster than large organizations.

## 6. Awareness

An organization will not begin the transformation to TQM until it is aware that the quality of the product or service must be improved. Awareness comes about when an organization loses market share or realizes that quality and productivity go hand-in-hand. It also occurs if TQM is mandated by the customer or if management realizes that TQM is a better way to run a business and compete in domestic and world markets.

Automation and other productivity enhancements might not help a corporation if it is unable to market its product or service because the quality is poor. The Japanese learned this fact from practical experience. Prior to World War 11, they could sell their products only at ridiculously low prices, and even then it was difficult to secure repeat sales. Until recently, corporations have not recognized the importance of quality. However, a new attitude has emerged quality first among the equals of cost and service. To sum it up, the customer wants value.



## 7. Implementing Total Quality Management Concepts

Since World War II, the Japanese have been very successful using the American ideas for total quality improvement they learned from Deming and Juran. In the late 1970s Americans became interested in the success of Japanese firms and discovered that their management processes were the cornerstone of that success. Some American companies adopted TQM and applied it successfully, notably Ford Motor Company, Hewlett Packard, Campbell Soup Company, and the Paul Revere Insurance Company. Others were less successful, largely it seems, because they were unable to accomplish the cultural and organizational changes required to implement TQM principles.

The TQM implementation process begins with senior management and, most important, the CEO's commitment. The importance of the senior management role cannot be overstated. Leadership is essential during every phase of the implementation process and particularly at the start. In fact, indifference and lack of involvement by senior management are frequently cited as the principal reasons for the failure of quality improvement efforts. Delegation and rhetoric are insufficient involvement is required.

Senior management needs to be educated in the TQM concepts. In addition to formal education, managers should visit successful TQM organizations, read selected articles and books, and attend seminars and conferences. The next step is for senior management to develop an implementation plan.

Timing of the implementation process can be very important. Is the organization ready to embark on the total quality journey? There may be some foreseeable problems, such as a reorganization, change in senior management personnel, interpersonal conflicts, a current crisis, or a time consuming activity. These problems may postpone implementation to a more favorable time.

The next step is the formation of the quality council initiation of these duties is a substantial part of the implementation of TQM. The development of core values, a vision statement, a mission statement, and a quality policy statement, with input from all personnel, should be completed first.

The active involvement of middle managers and first line supervisors is essential to the success of the TQM effort. They are accountable for achieving many of the organization's performance goals and objectives, and they form enduring links in the communication chain from senior management to the front line workers. Without middle management's early and active support, the TQM effort could fail. Senior management needs to ensure that managers at all levels have an opportunity, as soon as possible, to develop ownership in the TQM effort and a chance to acquire the insight and skills necessary to become leaders. One way to accomplish this concept is to have a retreat. The retreat will focus on TQM training, leadership skills, and active involvement in the development of the organization's statements.

If there is a union, there should be early discussions with the representatives on TQM. Managers should involve union leaders by sharing with them implementation plans for TQM. As the quality effort progresses, managers and union leaders should work together on quality improvement activities.

At this stage of the implementation process, it is important to communicate TQM to the entire organization. Communication is important throughout the implementation stage. Communication is necessary to create TQM awareness interest, desire, and action. Everyone needs to be trained in quality awareness and problem solving. This training is conducted when the employee is placed on a project team or the work group is ready for the training.

Customer, employee, and supplier surveys must be conducted to benchmark the attitudes of these three stakeholders. Information from these surveys provides ideas for quality improvement projects. The quality council determines the quality improvement projects. In addition the council establishes the project teams and work groups and monitors their progress. The organization has to be patient and not rush the teams for solutions that don't eliminate the root causes. There is often a tendency to rush the implementation process.

TECSTAR, a small business, was able to achieve savings of more than \$3 million the first year of its TQM program. On the other hand, Karlee, a Malcolm Baldrige

## 8. Obstacles

Implementation of TQM is described in the next chapter, on leadership. This section gives information concerning the obstacles associated with implementation.

Many organizations, especially small ones with a niche, are comfortable with their current state. They are satisfied with the amount of work being performed, the profits realized, and the perception that the customers are satisfied. Organizations with this culture will see little need for TQM until they begin to lose market share.

Once an organization embarks on TQM, there will be obstacles to its successful implementation. The first eight most common were determined by Robert J. Masters after an extensive literature search and the last obstacle added by the authors They are given below.

- Lack of Management Commitment
- Inability to Change Organizational Culture
- improper Planning
- Lack of Continuous Training and Education
- Incompatible Organizational Structure and Isolated Individuals And Departments
- Ineffective Measurement Techniques and Lack Of Access
- Paying Inadequate Attention To Internal and External Customers
- Inadequate Use of Empowerment Arid Teamwork
- Failure to Continually Improve

## 9. Benefits of TQM

According to a survey of manufacturing firms in Georgia, the benefits of TQM are improved quality, employee participation, teamwork, working relationships, customer satisfaction, employee satisfaction, productivity, communication, profitability, and market share.

TQM is a good investment as shown by a ten-year study by Hendricks and Singhai. They showed that there is a strong link between TQM and financial performance. The researchers selected a group of 600 publicly traded organizations that had won awards for effectively implementing TQM. They then selected a control group similar in size and industry to the award winners. Performance of both groups was compared during the five years prior to the award and five years after winning the award. No difference was shown between the two groups prior to the award. However, as shown below the award group far outstripped the control group during the five-year period after the award.

<i>Description</i>	<i>Control</i>	<i>Award</i>
<i>Growth in Operating Income</i>	43%	91%
<i>Increase in Sales</i>	32%	69%
<i>Increase in Total Assets</i>	37%	79%

The study also showed that stock price performance for the award winners was 114% while the S&P was 80%. In addition, the study showed that small organizations out performed larger organizations. Recent studies have shown that only about 30% of manufacturing organizations have successfully implemented TQM.

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