

TOTAL QUALITY MANAGEMENT: A CONCEPTUAL REVIEW**A.P. Unde¹ and S.A. Unde²**¹Brahma Valley College of Engineering and Research Institute, Nashik²ASC & CS College, Ashvi, Sangamner

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ABSTRACT

The concept of quality has existed for many years, though it's meaning has changed and evolved over time. Since the mid 1980's Total Quality Management (TQM) is considered as the universal solution for a range of organization problems including organizational performance. Today, successful companies understand that quality provides a competitive advantage. They put the customer first and have defined quality as meeting or exceeding customer expectations. Total quality management (TQM) comprises of organization-wide efforts to install and make perpetual atmosphere where employees persistently improve their ability to give on demand products and services that customers will discover of specific value. TQM covers all functions of a business including service functions like finance and human resources. The concept has been highly popular in both academics and in practice. This article carries a conceptual review of TQM.

Keywords: Total quality management, Quality, Employees, Customers

Introduction

The concept of quality has existed for many years, though it's meaning has changed and evolved over time. In the early twentieth century, quality management meant inspecting products to ensure that they met specifications. In the 1940s, during World War II, quality became more statistical in nature. Statistical sampling techniques were used to evaluate quality and quality control charts were used to monitor the production process. In the 1960s, with the help of so-called "quality gurus," the concept took on a broader meaning. Quality began to be viewed as something that encompassed the entire organization, not only the production process. Since all functions were responsible for product quality and all shared the costs of poor quality, quality was seen as a concept that affected the entire organization. Since the mid 1980's Total Quality Management (TQM) is considered as the universal solution for a range of organization problems including organizational performance. Today, successful companies understand that quality provides a competitive advantage. They put the customer first and have defined quality as meeting or exceeding customer expectations.

Total quality management (TQM) comprises of organization-wide efforts to "install and make perpetual atmosphere where employees persistently improve their ability to give on

demand products and services that customers will discover of specific value." "Total" emphasizes that departments in addition to production (for instance sales and marketing, accounting and finance, engineering and design) are committed to improve their operations; "management" accentuates that executives are committed to effectively manage quality through funding, training, staffing, and goal setting. While there is no broadly agreed-upon approach, TQM efforts regularly draw heavily on the previously developed techniques and tools of quality control. TQM enjoyed widespread consideration during the late 1980s and early 1990s before being dominated by ISO 9000, Lean manufacturing, and Six Sigma. Some people see TQM as something necessary to reach competitiveness but others claim TQM to be merely a management fad (Hellsten and Klefsjo 2000). TQM literature tends to suggest that hard TQM has a profound impact on organizational performance (Rahman and Bullock 2004). It is seen that the lean production philosophy and the six sigma steps are essentially the same and both have developed from the same root – the Japanese TQM practices (Dahlgaard and Dahlgaard-Park 2006). Total Quality Management (TQM) is implemented along with Just-in-Time (JIT) and Total Productive Maintenance (TPM) (Cua et al. 2001). There are both theoretical and

practical difficulties in applying TQM in organizations (Mosadeghrad 2014).

Features of TQM

The important features of TQM are as under- There is no extensive agreement as to what TQM is and what actions it requires of organizations; though a review of the original United States Navy effort gives an uneven understanding of what is involved in TQM. The key concepts in the TQM effort attempted by the Navy in the 1980s include:

- "Quality is defined by customers' necessities."
- "Top management has direct duty for quality improvement."
- "Increased quality comes from improvement of work processes and systematic analysis."
- "Quality improvement is a consistent exertion and conducted throughout the organization."

The Navy utilized the following tools and techniques:

- The PDCA cycle to drive issues to goals
- Ad hoc cross-functional teams (like quality circles) responsible for addressing quick process issues
- Standing cross-functional teams responsible for the improvement of procedures over the long term
- Active management contribution through steering committees
- Use of the Seven Basic Tools of Quality to examine quality-related issues

Objectives of TQM

The principal objectives of Total Quality Management are as follows:-

1. Continuous improvement of the organization which is equivalent to or more noteworthy than that of any contender.
2. Continuous and persistent cost decrease
3. Continuous and persevering quality improvement
4. Total involvement i.e., creating an organization whereby everyone is working Towards making the organization the best in its region of activity and to capitalize on the sense of accomplishment and working in a world class organization.

Seven Important Principles of Total Quality Management

Free Management Library (2015) has stated the 7 Important Principles of Total Quality Management-

Total Quality Management (TQM) is an approach that organizations utilize to improve their internal processes and amplify customer satisfaction. When it is appropriately implemented, this style of management can prompt diminished costs related to corrective or preventative maintenance, improved overall performance, and an expanded number of happy and loyal customers.

However, TQM isn't something that happens overnight. While there are a numeral of software solutions that will help organizations rapidly start to implement a quality management system, there are some basic philosophies that the company must incorporate throughout every department of the company and at each level of management. Whatever other resources you utilize, you should adopt these seven significant principles of Total Quality Management as a base for all your activities.

1. Quality can and must be managed

Many companies have floundered in a repetitive cycle of chaos and customer complaints. They accept that their operations are just excessively enormous to effectively manage the level of quality. The initial step in the TQM process, then, is to realize there is a problem and that it tends to be controlled.

2. Processes, not people, are the problem

If your procedure is causing problems, it won't make any difference how many times you hire new employees or how many training sessions you place them through. Correct the procedure and then train your persons on these new procedures.

3. Don't treat symptoms, look for the cure

If you just patch over the basic problems in the process, you will certainly not be able to fully reach your potential. If, for instance, your shipping division is falling behind, you might find that it is because of holdups in manufacturing. Go for the source to right the problem.

4. Every employee is responsible for quality

Everybody in the company, from the workers on the line to the upper management, must understand that they have a significant part to play in ensuring large levels of quality in their products and services. Everybody has a customer to delight, and they should all step up and take responsibility for them.

5. Quality must be measurable

A quality management system is only effective when you can measure the results. You need to see how the procedure is implemented and if it is having the desired impact. This will enable you set your objectives for the future and ensure that every division is working toward the same result.

6. Quality improvements must be continuous

Total Quality Management isn't something that can be done once and afterward forgotten. It's not a management "phase" that will end after a problem has been amended. Real enhancements must occur frequently and persistently in order to raise customer satisfaction and loyalty.

7. Quality is a long-term investment

Quality management is not a rapid fix. You can buy QMS software that will enable you get things started, but you should comprehend that real results won't occur immediately. TQM is a long-term investment, and it is intended to help you find long-term success.

The Eight Elements of TQM

TQM has been coined to depict a philosophy that makes quality the main impetus behind leadership, planning, design, and improvement initiatives. For this, TQM requires the help of those 8 key elements. These elements can be partitioned into four groups according to their function (Isixsigma 2015). The groups are:

- I. Foundation – It includes: Ethics, Trust and Integrity.
- II. Building Bricks – It includes: Training, Leadership and Teamwork.
- III. Binding Mortar – It includes: Communication.
- IV. Roof – It includes: Recognition.

I. Foundation

TQM is based on a foundation of integrity, ethics, and trust. It encourages openness, sincerity and fairness and allows involvement

by everybody. This is the way to unlocking the ultimate potential of TQM. These 3 elements move together, in any case, each element offers something different to the TQM concept.

1. *Ethics* – Ethics is the discipline concerned with good and bad in any circumstance. It is a two-faceted subject represented by individual and organizational ethics. Organizational ethics establish a business code of ethics that layouts guidelines that all employees are to adhere to in the presentation of their work. Individual ethics incorporate personal rights or wrongs.

2. *Integrity* – Integrity suggests honesty, values, morals, fairness, and adherence to the facts and sincerity. The feature is what customers (external or internal) expect and deserve to receive. Individuals see the opposite of integrity as duplicity. TQM won't work in an atmosphere of duplicity.

3. *Trust* – Trust is a by-product of ethical and integrity conduct. Without trust, the framework of TQM can't be constructed. Trust encourages full participation of all members. It permits empowerment that encourages commitment and it encourages pride ownership. It permits decision making at proper levels in the organization, encourages individual risk-taking for nonstop improvement and helps to ensure that measurements focus on improvement of procedure and are not used to contend people. Trust is fundamental to ensure customer satisfaction. So, trust builds the cooperative environment fundamental for TQM.

II. Bricks

Basing on the strong foundation of ethics, trust, and integrity, bricks are placed to reach the roof of recognition. It incorporates:

4. *Training* – Training is significant for employees to be highly productive. Supervisors are solely responsible for executing TQM within their departments, and teaching their employees the philosophies of TQM. Training that employees need are interpersonal skills, problem solving, decision making, the ability to function within teams, business economics and technical skills, job management performance analysis and improvement. During the creation and arrangement of TQM, employees are trained so that they can become efficient employees for the company.

5. *Teamwork* –To become fruitful in business, teamwork is also a key component of TQM. With the utilization of teams, the business will get speedier and better solutions to problems. Teams also give more permanent improvements in procedures and operations. In teams, individuals feel more comfortable bringing up problems that may happen, and can get help from other workers to discover a solution and put into place. There are mostly 3 types of teams that TQM organizations adopt:

A. *Quality improvement teams or excellence teams (QITs)* –These are brief teams with the purpose of dealing with definite problems that often repeat. These teams are set up for period of 3 to 12 months.

B. *Problem solving teams (PSTs)* –These are brief teams to tackle certain problems and also to recognize and overcome causes of problems. They generally last from one week to 3 months.

C. *Natural work teams (NWTs)* – These teams comprise of small groups of skilled workers who share responsibilities and tasks. These teams use concepts such as employee involvement teams, quality circles and self-managing teams. These teams usually work for one to two hours a week.

6. *Leadership* – It is possibly the most significant element in TQM. It appears all over in organization. Leadership in TQM requires the manager to give an inspiring vision, make strategic directions that are comprehended by all and to ingrain values that guide subordinates. For TQM to be fruitful in the business, the supervisor must be dedicated in leading his employees. A supervisor must comprehend TQM, believe in it and then demonstrate their belief and commitment through their day by day practices of TQM. The supervisor ensures that strategies, philosophies, values and goals are transmitted down throughout the organization to give focus, clarity and direction. A key point is that TQM has to be introduced and driven by top management. Commitment and personal involvement is requisite from top management in creating and conveying clear quality values and goals reliable with the objectives of the company and in creating and deploying well

defined systems, methods and performance measures for accomplishing those goals.

III. *Binding Mortar*

7. *Communication* – It ties everything together. Beginning from establishment to roof of the TQM house, everything is bound by strong mortar of communication. It acts as an essential link between all elements of TQM. Communication means a typical comprehension of ideas between the sender and the receiver. The achievement of TQM demands communication with and among all the organization members, customers and suppliers. Supervisors must keep open aviation routes where employees can send and receive information about the TQM process. Communication combined with the sharing of correct information is indispensable. For communication to be credible the message must be clear and recipient must interpret in the way the sender planned.

There are different ways of communication such as:

A. *Downward communication* – This is the predominant type of communication in an organization. Presentations and discussions fundamentally do it. By this the supervisors are able to make the employees obvious about TQM.

B. *Upward communication* – By this the lower level of employees are able to give suggestions to upper management of the effects of TQM. As employees give insight and constructive criticism, supervisors must listen adequately to address the circumstance that occurs using TQM. This forms a level of trust between employees and supervisors. This is also related to empowering communication, where supervisors keep open ears and listen to others.

C. *Sideways communication* – This kind of communication is significant because it breaks down barriers between departments. It also permits dealing with customers and suppliers in an increasingly proficient way.

IV. *Roof*

8. *Recognition* – Recognition is the last and final element in the whole system. It should be provided for both suggestions and accomplishments for teams as well as

individuals. Employees endeavour to get recognition for themselves and their teams. Recognizing and detecting contributors is the most significant job of a supervisor. As individuals are recognized, there can be gigantic changes in productivity, self-esteem, quality and the amount of exertion exhorted to the task at hand. Recognition comes in its best structure when it is quickly following an action that an employee has performed. Recognition comes in various places, ways and time such as,

- *Places* – Good performers can be perceived in front of departments, on performance boards and also in front of top management.
- *Ways* – It can be by way of individual letter from top management. Also by award banquets, trophies, plaques etc.
- *Time* – Recognition can provide at any time like in staff meeting, annual award banquets, etc.

Five Important Factors in Total Quality Management

Napierala (2012) has discussed the five important factors in Total Quality Management-

Total Quality Management (TQM) is a participative, organized approach to planning and actualizing a constant organizational improvement process. Its approach is centered on exceeding customers' expectations, building commitment, identifying problems, and promoting open decision-making among workers. There are 5 major steps to TQM, and each is fundamental to successful implementation.

1. Commitment and Understanding from Employees

It is key to ensure that all employees inside your organization know about the Total Quality Management (TQM) policies and make them a basic part of their work. Your employees should know your corporate objectives and recognize the significance of these objectives to the overall success of your organization. Employees need to comprehend what is expected from them and why. It might seem like a no-brainer but too often this is not driven home by management. When employees

comprehend and share the same vision as management a world of potential is released. If they are in the dark, commitment is lacking and policies won't be effectively deployed.

2. Quality Improvement Culture

The organizational culture should be modernized on a continuous basis to empower employee feedback. Your employees are brimming with significant knowledge- embrace it! Listen to those executing the processes that keep your business moving every day. If employees have a thought on how to improve operations, they need to know management regards their ideas or they won't share.

3. Continuous Improvement in Process

There is no stopping. If you are not pushing ahead, you are moving backwards. Total Quality Management (TQM) is a continuous procedure and not a program. This requires consistent improvement in all the related procedures, policies and controls established by management. Do your research. Hold your ear to the market and attempt to routinely revise all aspects of your operation. There should be a steady effort to improve proficiency – which will result in steady scopes for improvement (even if some improvements are small).

4. Focus on Customer Requirements

In the present market, customers require and anticipate perfect goods and services with zero defects. Concentrating on customer requirements is noteworthy to long term survival and basic in order to build relationships with customers. Individuals do business based on emotion. Competitors will consistently be a risk. Keep your customers close and happy. Ensure exact necessities of all customers are documented and comprehended by everyone that touches the account.

5. Effective Control

It is basic to monitor and measure the presentation of the business. It's easy to forget how many times in a year an employee does not adjust to a controlled procedure or how many times a piece of equipment was down because of unplanned maintenance. If strict documentation is maintained, you will be able to independently quantify areas for improvement and focus your efforts where they

will give the best return of both your time and financial resources.

In general the following benefits of TQM are highlighted –

Table 1: Tangible and Intangible benefits of TQM

Tangible benefits	Intangible benefits
Better product quality	Effective collaboration
Productivity improvement	Enhancement of job interest
Decreased quality costs	Improvement in human relations and more work region morale
Expanded market	Participative culture
Expanded profitability	Customer satisfaction
Diminished employee grievances	Improved correspondence
Upgraded problem	Solving capacity
Improved corporate health	Better company image
And character of the company	

TQM Implementation

A study of TQM implementation approaches of different organizations reveal some of the commonly approaches as follows:

- To receive and apply a few specific quality management techniques to advance TQM
- To accept the philosophy of any one of the internationally recognized quality management
- To visit and study the quality management practices embraced by various companies and formulate a comprehensive plan for the individual needs.
- To randomly choose some of the techniques of quality management as desired by senior management and work on these
- To utilize the experience of organizations is a particular national setting, mostly Japan.

Framework for implementing the TQM

1. Identify the key interests, degree of commitment and list down the long term changes required.
2. Define the objectives of TQM

3. Identify resources accessible and create comprehension of organizational system with quality system
4. Indicate top management commitment through quality policies procedures and processes
5. Make companywide awareness and participative work atmosphere by emphasizing customer-oriented values, encourage quality commitment
6. Design plans, create determines about future
7. Recognize key issues and constrains on implementation, develop strategies for execution
8. Recognize and allocate resources, build momentum for change, execute plans
9. Implement and monitor
10. Measure benefits in terms of improved customer satisfaction
11. Review and reward.

Conclusion

TQM is a set of management practices all through the organization, geared to ensure the organization reliably meets or exceeds customer requirements. TQM places strong spotlight on process measurement and controls as means of nonstop improvement. A core definition of total quality management (TQM) depicts a management approach to long-term accomplishment through customer satisfaction. In a TQM exertion, all members of an organization contribute in improving processes, services, products, and the culture in which they work. Total Quality Management (TQM) is a continuous procedure and not a program. This requires consistent improvement in all the related procedures, policies and controls established by management. There are tangible and intangible benefits from TQM. Many organizations implement TQM with other programs like JIT and TPM. However, TQM programs to be successful need proper implementation. Otherwise they can be a failure as well.

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