TOTAL QUALITY MANAGEMENT: A MANAGERIAL APPROACH IN LIS SECTOR

Mohsina Aftab  
Guest Faculty, DLIS, AMU, Aligarh

Shazia Khan  
Research Scholar, DLIS, AMU, Aligarh

ABSTRACT

Total quality management (TQM) is one of the important management techniques that employed to enhance quality and productivity in organizations/institutions. The concept of TQM is increased rapidly in recent years. TQM is a comprehensive management approach that unites all sections and employees top to bottom and works across an organization/ institution. It provides a structure for implementing effective quality and productivity initiatives that can boost the profitability and competitiveness of organizations. This paper discusses TQM, principles, benefits, tools and techniques and concludes with its use in library & information sector.

Keywords: TQM, ‘Poke-A-Yoke’, PDCA, Pareto chart, Industrial Revolution, Feedback, LIS

INTRODUCTION

In former days, libraries were considered only as a store house of information but with the emergence of modern technology and its use in libraries has changed the manner to manage the libraries. A paradigm shift occurs in terminology and nowadays these are popularly known as Library and Information Centres because currently they are not only accumulating and preserving the information but also creating and disseminating them to their clienteles for utmost use and benefits. The use of modern technology has a good effect and overcome many problems such as literature explosion, varying and multifaceted information needs of the clientele, scattered information, quality and reliability of information etc., that have produced major issues and challenges in front of librarians that how the information should be managed. Nowadays the concept of library has to shift from the state of being merely inactive customer of knowledge to the stage of becoming a platform for creation, exchange and utilization of knowledge.

Management of any institution or organization is a very intelligent and painstaking endeavour. To manage a library, is not a cup of tea, it is quite meticulous, diligent and challenging
job. Today’s librarians must know how to deal with the changes in technological advances intelligently and objectively by adopting a latest technique of management for providing library resources. Therefore, the traditional techniques of managing a library centre become incapable and to meet the challenges the librarians, information managers and executives are searching for new solutions, approaches and answers. The aim of participative management i.e., involving every member from the team of staff to achieve total quality in every aspect of products and services would now become pertinent, significant and valuable i.e., TQM.

CONCEPT

TQM is not simply a means a quantifying quality; it is a means of expanding organizational thinking and learning capabilities. The concept of quality has existed for many years, though it’s meaning has changed and evolved over time. In earlier days, there were fixed organizational standards to make qualitative products and services. But presently, the goal has been shifted to satisfy the customer’s needs and quality improvement regardless of specifications. “Total quality management (TQM) was developed by William Deming, a management consultant whose work had great impact on Japanese manufacturing. It focuses on ensuring that internal guidelines and process standards reduce errors and defects”. (Investopedia, 2014)

The evolution of quality management can be traced back to the days of the industrial revolution. Initially all “productions” was limited in scale and complexity. The responsibility of ensuring the quality of the product was vested with the producer. With workers beginning to become more conscious of their rights and privileges, the trade union movement began to gather strengths. It therefore, became imperative for “management” to learn how to relate with representative of trade union, giving rise to the “industrial relations”. The latter half of the 20th century saw a paradigm shift in the approach of enterprises towards quality. While inspection merely separated products into acceptable and not acceptable, quality control looked at reasons for rejection and quality assurance provided evidence that quality was indeed being controlled.

TQM has emerged in the last decade as the preferred method for reducing defects in production, increasing customer satisfaction and boosting productivity. It has been adopted to drive innovation and improvement in industry, supplanting quality circles, MBO, and other cures used in the recent pasts. The transformation that began with manufacturing is now being adopted by service organizations, largely because customer’s expectations have risen sharply, and because quality improvement programs can be adapted to service industries.

DEFINITIONS OF TQM

TQM is concerned with the integration of all efforts in the organization towards quality and customer satisfaction. In TQM, T refers to Total means that everyone in the organization is involved in the final product or service to the customer. Q indicates Quality which means delighting the customer by continually meeting and improving upon agreed requirements. M represents Management that is a managed process involving people, systems, tools, techniques. Some of the authoritative definitions of TQM are as follows:

Investopedia explains 'Total Quality Management - TQM’ as “The continuous process of reducing or eliminating errors in manufacturing, streamlining supply chain management, improving the customer experience and ensuring that employees are up-to-speed with their training. Total quality management aims to hold all parties involved in the production process as accountable for the overall quality of the final product or service”. (Investopedia, 2014)
United States Department of Defense (1988) defines TQM as “Total Quality Management (TQM) in the Department of Defense is a strategy for continuously improving performance at every level, and in all areas of responsibility. It combines fundamental management techniques, existing improvement efforts, and specialized technical tools under a disciplined structure focused on continuously improving all processes. Improved performance is directed at satisfying such broad goals as cost, quality, schedule, and mission need and suitability. Increasing user satisfaction is the overriding objective.” (US Department of Defense, 1988)

International Organization for Standardization standard ISO 8402:1994 states that "A management approach of an organization centered on quality, based on the participation of all its members and aiming at long term success through customer satisfaction and benefits to all members of the organization and society." (Backet & Brookes, 2008)

The American Society for Quality defines TQM as "A term first used to describe a management approach to quality improvement. Since then, TQM has taken on many meanings. Simply put, it is a management approach to long-term success through customer satisfaction. TQM is based on all members of an organization participating in improving processes, products, services and the culture in which they work. The methods for implementing this approach are found in the teachings of such quality leaders as Philip B. Crosby, W. Edwards Deming, Armand V. Feigenbaum, Kaoru Ishikawa and Joseph M. Juran." (TMSS, 2010)

PRINCIPLES OF TQM

The management scientists have derived certain principles from the philosophy of TQM concept. Dhiman & Yashoda, (2004) described these principles as follows:

1. Leadership: Effective leadership is the foundation for TQM. Top management should provide the leadership for quality awakening in the organization. They should evolve effective plans and provide leadership in achieving the objectives.
2. Internal and External Customers: The external customers are the outsiders who buy the organization’s products or services. The internal customers are the staff of the organization including those not in direct contacts with the external customers. These staff interact with other staff as may are involved in dispensation of service of the organization. In this way the customer orientation can pervade the organization.
3. Customer Satisfaction: The customer has to decide what the standards should be and not the supplier/producer. If the organization decides the standards, the product may not satisfy the customer’s requirement. Therefore, quality is customer defined.
4. Performance Measurement: Performance measurement needs to be based upon timely measures and feedback on performance thorough superior quality information systems.
5. Measure of Success: Every organization has to define what the criterion for success in their operations is and how to measure it. For instance, one of the measures is sales of products and the resulting profits. Though it is difficult to measure the customer’s satisfaction, it can be measured through indirect indicators such as increased sales, repeated orders, exports, etc.
6. Continuous Improvement is the Goal: Continuous improvement should be the responsibility of everyone in the organization. The organization should not be satisfied with one-time success. It should aim at sustaining success through continuous improvement, because customers will expect still better services and products.
7. Training and Education are Essential: The Manual specifies the job and what they are supposed to do and how they can do them. The employee should be educated and trained in their trade; otherwise they cannot understand the documentations and manuals.
8. **Communication is Essential**: Right communication is to be maintained to carry out the jobs in the right way. Manuals and other such documentations help to achieve proper communication. The organization should also improve communications thorough newsletters, notice-boards, problem solving sessions and departmental meetings etc.

9. **Attitudes towards Quality**: Every employee should develop an attitude to improve the quality of the organization.

10. **Team Work**: The organization has to make every effort to mould the employees to work as a team. It is the only way through which an organization can achieve its objective and practice. Recognition of achievements is also equally for the success of TQM program.

11. **Employee Involvement**: Employee involvement means that each individual must take the initiative and rely upon someone else. To achieve this, the organization needs a culture which encourages this behavior. Everyone must understand that they contribute equally and can only succeed through co-operation and support.

**TOOLS AND TECHNIQUES OF TQM:**

The tools of ‘Total Quality Management’ (TQM) help institutions and organizations to spot out, examine and evaluate qualitative and quantitative data that is pertinent to their work. These tools can identify procedures, ideas, statistics, cause and effect concerns and other issues relevant to their organizations. There are some basic tools of quality which are discussed below:

1. Check Sheet
2. Scatter Diagram
3. Cause and Effect Diagram
4. Histogram
5. Pareto Chart
6. Control Charts
7. Flow Chart
9. Brainstorming
10. PDCA

1. **Check Sheet**

The check sheet is a form used to collect quantitative or qualitative data in actual time at the place where the data is generated. When the information is quantitative, the check sheet is sometimes called a tally sheet.

2. **Scatter Diagram**
A scatter diagram/plot is effectively a line graph with no line - i.e. the point intersections between the two data sets are plotted but no attempt is made to physically draw a line. It is used to discover cause and effect relationships, as well as bonds and correlations, between two variables. This kind of plot is also called a scatter chart, scatter-gram, scatter diagram, or scatter graph.

3. **Cause and Effect Diagram**

![Cause and Effect Diagram](image)

Cause and Effect diagrams (also called Ishikawa diagrams, herringbone diagrams, or Fishikawa) are causal diagrams created by Kaoru Ishikawa (1968) that show the causes of a specific event. Ishikawa diagrams were popularized by Kaoru Ishikawa in the 1960s, who pioneered quality management processes in the Kawasaki shipyards, and in the process became one of the founding fathers of modern management. It is also known as a fishbone diagram because of its shape, similar to the side view of a fish skeleton. It is used to identify potential factors causing an overall effect and to see all possible causes of an effect and expectantly find the root of process imperfections.

4. **Histograms**

![Histogram](image)

A histogram was first introduced by Karl Pearson. It is a graphical representation of the distribution of data and an estimate of the probability distribution of a continuous variable. It
enables us to see patterns that are difficult to see in a simple table of numbers and can be analyzed to draw conclusions about the data set.

5. **Pareto Chart**

A Pareto chart named after Vilfredo Pareto, is based on 80-20 principle, a type of chart that contains both bars and a line graph, where descending order of bars indicates individual values and the cumulative total is represented by the line. The principle stated that 80% of problems stem from 20% of the various causes. The purpose of the Pareto chart is to highlight the most important among a (typically large) set of factors. In quality control, it often represents the most common sources of defects, the highest occurring type of defect, or the most frequent reasons for customer complaints, and so on.

6. **Control Charts**

Control charts, also known as Shewhart charts named after Walter A. Shewhart or process-behavior charts, in statistical process control are tools used to determine if a manufacturing or business process is in a state of statistical control. The purpose is to determine whether a process should undergo a formal examination for quality-related problems.
7. Flow Charts

Flow Charts are the common type of charts defined as a pictorial representation of describing a process used to plan stages of a project. It assist in the definition and analysis of each step in a process by illustrating it in a clear and comprehensive manner, identify areas where workflow may be blocked, or diverted, and where workflow is fluid and identify where steps need to be added or removed to improve efficiency and create standardized workflow.


The concept of “Poke-A Yoke” belongs to Japanese Management Philosophy to make a process perfect. The idea is to plan a process in such a manner that it is self checking or include process steps that caused revealing and possible rectification of any defect.

9. Brainstorming

The process has become a indispensable element of TQM movement. The concept is to invite participants to suggest “solutions” to a problem without any evaluation of the usefulness or correctness of their ideas. There are several approaches that are possible including open suggestions, rotating suggestions or blind suggestions. There are several computer tools have been developed to assist in this process. After a period of time or after all suggestions has been made there is the discussion of the “value” of the suggestions.

10. PDCA
The “Plan-Do-Check-Act” style of management where each project or procedure is planned according to needs and outcome, it is then tested, examined for efficiency and effectiveness, and then acted upon if anything in the process needs to be altered. This tool is also known as Shewhart cycle. Deming popularized it in Japan as a result the Japanese refer to it as the Deming Cycle. The tool emphasizes a new plan for change. It carries out tests to make a change on a small scale, observes the effects and finally studies the result to determine what has been learned. The cycle is repeated as needed.

**BENEFITS OF TQM**

There are infinite benefits of TQM. While applying TQM in any organization, the organization will obtain some of the following benefits:
- Significantly improved product or service
- Elimination of defects and decrease in wasted resources
- Substantial rise in productivity
- Persistent competitive gain
- Increased market share
- Enhanced Returns on Investment
- Motivated work force
- Improved customer focus and satisfaction
- Increased customer loyalty and retention
- Reduced costs and better cost management
- Improved employee morale

**TQM IN LIBRARIES**

TQM is now practiced among many service industries such as Airlines, the Military, Education, Banking institutions, Insurance companies, Health care providers as well as Libraries. In earlier days librarians were supposed to be custodians of libraries or knowledge and they did not actively participate in information dissemination activities. Though the main aim/objective of libraries is to satisfy the users, the library professionals often forget that. But today’s libraries are shifted to a position where they have to provide quality services to its users, to justify their existence. So, now libraries are also started adopting TQM practices following other kinds of service industries. The quality assurance initiative in Library & Information Science has primarily come from the parent organization to which it provide services. However, in the later years, the quality assurance system has become an essential feature of LIS management.

The practice of Quality Management in Library & Information Science sector existed since the evolution of the subject itself, but the terminology used for these varied widely. Performance Indicators; performance evaluation; evaluation of reference sources using check-list of criteria; Evaluation of Information Retrieval systems using Precision and Recall ratios; Cost-Benefit and cost effectiveness studies; user surveys electing opinions on library services - all these studies make part and parcel of Quality Studies using different mechanisms of assessment and methodologies. Quality studies in LIS sector are mostly isolated and are made on different aspects of library management, services, user-studies, etc. The evidence produced by the few TQM cases in the LIS sector indicates that TQM is a highly relevant management theory for information sector. (Saroja & Sujatha, n.d.)

The users are the ultimate evaluator of the quality of the services being provided by the library and information centers. The two main aims of the library are user satisfaction and continuous improvement of the Library services. By applying TQM technique in libraries/information centers, the librarians can not only satisfy the users consistently according to their needs and requirements
but also improve quality of their services frequently. TQM in Library & Information centers may help us in:

- Improved quality of services and user satisfaction
- Developing an inventory of all the documents available in the library
- Facilitating search through a number of tools which can provide access to universal publications
- Better library resources
- Higher productivity by efficient utilization of men, machines and materials
- Enhance skill and performance of end users to profitability interact with information systems and services.
- Better cost management
- Reduction in user grievances
- Elimination of bottlenecks and tension free work environment leading to good human relations and improvement of confidence among users
- Update and enhance the abilities of staff

CONCLUSION

The concept of TQM powerfully works in such an environment where all the members of the management equally involve and support it. It is a team work which continues focus on quality improvement that also reduces errors and defects. Libraries are ideal places to implement TQM because these are service oriented institutions devoted to their users. They try to provide quality services to their users within a stipulated budget and constantly sought ways to improve quality of resources and services as well. The right selection and use of tools and techniques is a staple component of any successful TQM implementation plan which can enhance the reputation of an organization.

REFERENCES


