CHAPTER I

INTRODUCTION

Total Quality Management, TQM, is a universal term that identifies a family of management approaches that fall under the generic umbrella of “quality”. TQM is both a management philosophy and a systematic way of putting the philosophy into practice. A simple introductory definition of TQM is “a structured system of continuous improvement employing participative management and centred on the needs of customers”. This definition contains the key elements of TQM: structured process, continuous improvement, employee involvement, and customer focus.

These basic concepts have spawned a lexical “duck soup” of quality terminologies, typically comprising certain common elements, including “total,” “strategic,” “management,” “service,” “customer,” “improvement,” “process,” “control,” and “assurance.” These raw ingredients have been combined and recombined in every possible way to produce a host of similar phrases: quality improvement, quality assurance, continuous improvement, strategic quality management, total customer service, and total quality service.

Total quality management (TQM) is a new managing concept of quality. Its objective is to meet and exceed the customer’s expectations by developing a leadership driven process for providing a product or service with built in quality. Now-a-days, the whole concept of quality has changed. The drift is from provider oriented to customer oriented. Quality is the only driving force of the entire activity cycle from beginning to the end.
Quality denotes the degree of fitness for use. Naturally, the user/customer of the product/service is the focal point in quality issues. Total quality indicates the totality of approaches used by an organization to improve its performance to a level that delights the customers. The totality of approaches includes:

- Strategic thinking and a commonly agreed and clearly stated quality policy.
- The commitment and collaboration of all employees to provide maximum value to the customer.
- Customer orientation.
- Process focus rather than product focus.
- Leadership rather than management.
- Empowering employees.
- Continuous improvement.

Quality in library services can be built upon only through the continuous improvement process. To meet the changing requirements of the user with time requires updating of libraries continuously in terms of its resources, equipment and services. Quality service depends on how well, various elements function together in a service system.

In today’s world any organization big or small, profit making business entity or nonprofit making one thrives on the quality of service or product they produce and provide to their customers. Just like information technology, quality is the buzz word today.
Quality is the totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs. The concept of TQM is increasingly recommended as the means of satisfying the needs and expectation of their customer. The management philosophy of tireless striving towards perfection is gaining wide acceptance. In developed countries the interest in quality extends to every competitive business and industry. To stay ahead of the competition, the organizations sell quality as a value added service introducing revolutionary ideas into a very traditional business.

In the context of globalization and liberalization of our economy, competition to excel in the area of activity in various sectors such as industry, agriculture and sciences, has become the order of the day. However, the educational institutions which cater to the human resource development component of the above; sectors is yet to realize the necessity to orient themselves on these lines. Especially, educational institutions, should set an example in propagating quality consciousness, teamwork, optimization of resources and manage the competitive environment and encourage team spirit among all concerned. At a time when industrial concerns are vying with each other in procuring ISO certification. Total quality management (TQM) has to make a conscious effort to plan for products of high quality to be sent out their portals. This is where TQM assumes great significance in educational institutions.

TQM is a cooperative form of doing business that relies on the talents of both labour and management to continually improve quality and productivity
using teams. Embodied in this definition are three main ingredients necessary for TQM to flourish in an organization:

- Participative management.
- Continuous process improvement.
- Use of teams.

TQM is both philosophy and a set of guiding principles that represent the foundation of a continuously improving organization. TQM is the application of quantitative methods and human resources to improve the material and services supplied to an organization, all the production ceases within the organization, and the degree to which the needs of the customer are met, now and in the future.

TQM is the integration of all functions, processes and personnel within an organization in order to achieve the continuous improvement of the quality of services.

TQM can be understood well, if we look into each word closely.

Total: everybody, every level, every function, every process, every day.

Quality: continuous improvement of everything that we do.

Management: organizing, maintaining control and continuously improving the tasks of management by rotating PDCA cycle (plan, do, check, act).

In brief, TQM is the participation of each and every person in an organization performing quality control continuously so as to satisfy the needs of internal and external customers.
TQM is a journey and not a programme with an end. It is a group activity and management based respect for humanity. It is manageable with facts and date.

The entire structure of TQM is built on the following four cornerstones:

- To create the satisfied customer.
- Top management leadership and involvement.
- Participation by all (total involvement)
- Continuous improvement.

1.1 Meaning and Concept of Quality

The word quality has its origin from Latin word Qualitas. The dictionary meaning of quality is “the degree of goodness or worth”. In practical perspective the word quality is very difficult to define. According to Roa\(^1\) the “total” in total quality management dictates everything and everybody in organization is involved in the enterprise of continuous improvement. The “management” in total quality management is meant everyone, because everyone in the institution-, whatever his status, position or role, is the manager of his duty and responsibility. It has so many shades as “a practicable degree of uniformity and dependability, at low cost and suited to the market” (Gitlow \textit{et al}\(^2\)). Bradley\(^3\) views that quality is based on standards i.e. quantifiable and these standards are fixed and largely based on continuous improvement and it is associated with the concept of total quality management.
The British Standards Institution (BSI)\textsuperscript{4} defines quality in functional terms as the totality of features and characteristics of a product or service that bear upon its ability to satisfy the stated or implied needs. Navaratnam\textsuperscript{5} makes it specific by defining quality in terms of functional utility of product. Quality is thus a positive and dynamic idea achievable by design with meaning investment and not a negative idea of absence of defect (Crawford and Shutler)\textsuperscript{6}.

Total quality management is the application of quantitative methods and human resource to improve all the processes within an organization and exceed customer needs now and in the future. It integrates fundamental management techniques, existing improvement efforts, and technical tools under a disciplined approach (Besterfield \textit{et al})\textsuperscript{7}.

1.2 Origins of TQM

TQM is firmly rooted in the manufacturing sector, and the American “quality revolution” that began in the 1960s is commonly attributed to an American statistician, Dr. W. Edwards Deming (1900-1993). Deming did landmark work with Japanese manufacturers following World War II, when that nation was suffering from a negative balance of trade due to the inferior quality of the goods it produced. Deming helped the Japanese to rebuild a shattered economy by radically improving the quality and reputation of its products. So successful were Deming and his theoretical applications in Japan that he became a national hero there. One of Japan’s highest industrial awards, the Deming prize for quality, is named after him.
Earning a Ph.D. in mathematical physics from Yale University in 1928, Deming worked for the U.S. Department of Agriculture and the Bureau of the census before joining the faculty of New York University’s graduate school of business administration in 1946. His work in Japan began in 1950 when he was invited by the union of Japanese scientists and engineers to lecture for about 600 engineers in four cities (1). In his work with the Japanese and later with U.S. manufacturers such as Ford Motor Company, Deming advocated the use of statistical process control (SPC) to set rigorous production standards and reduce variability and error in production processes. He believed that inferior products were the result of uneven or faulty manufacturing processes and raw materials, over which management had control. Thus, he preached that management, not workers, had ultimate responsibility for the quality of industrial output, and that management’s commitment to quality, through constant improvement of the system-based and only 15 percent within employee control has become a mantra for quality practitioners everywhere.

Professor Garvin⁸ of the Harvard Business School identifies four eras in the history of quality management: (1) inspection, (2) statistical quality control, (3) quality assurance, and (4) strategic quality management. Garvin observes that the first three approaches were internal and production-focused. They employed, respectively, (1) approaches were internal and production line (inspection), (2) controlling production processes to minimize variation (statistical quality control), and (3) designing or improving production systems to yield consistent quality results.
By contrast, total quality (or strategic quality management, as Garvin calls it) is holistic and characterized by outward direction; it focuses on the needs and expectations of the customers of a product or service. Thus, over time responsibility for quality has moved backward or up the production line from a downstream department that performed the inspection, back to the engineering and production design departments, back again to upper-level management, and finally to widespread organizational commitment.

1.3 Principles of Total Quality Management

The Definition of total quality management mentioned so far is based on the concept and purpose it services. A more general definition was put forward in USA in 1992 by industries, corporate and academic institutions. Not so much a definition as an elaboration of the spirit and purpose of TQM, it says that Total Quality is a people-focused management system that aims at the continual increase in customer satisfaction accompanied by continually lower real cost. Total Quality is a systematic approach and not a separate programme. It is an integral part of high-level strategy, working horizontally across functions and departments and involving all employees from top to bottom, enabling backward and forward integration to manage the supply chain and customer chain. TQM stresses learning and adaptation to continual change as the keys to organizational success.

Approaches to TQM may be fine-tuned to meet the specific needs of business, but its basic elements remain unchanged. These elements are:

1. Customer focus.
2. Strategic planning and leadership.
3. Continuous improvement and learning, and
4. Empowerment and teamwork.

The other elements of TQM principles are internal customer approach and cross-functional customer-focused process, and the training of people. The former two elements can be considered as a subset of customer-focused approaches, and training people as a part of learning. These principles form the pillars of TQM structure in an organization, and need to be further discussed for total appreciation of total quality management system.

1.4 Customers

The Customer has a fundamental, noncommercial meaning within the TQM context. Simply put, customers are those who benefit from the organization’s work by using its services and products. As the customer concept began to enter education and service sectors in the early 1990s, there were strong objections to its commercial implications. Particularly in academia the skeptics have maintained that education and knowledge customer is overly narrow. In TQM terms, students are only one part of the customer picture; others include their parents, alumni, taxpayers, other sources of educational funding, the businesses and professions that will employ an institution’s graduates, and ultimately, society at large. All benefit-or not-from the quality and effectiveness of an institution’s faculty, staff, teaching, curriculum, and programmes.

Further, TQM recognizes two basic categories of customers—internal and external. External customers are those who placed outside the organization and gets benefit from its work; namely, students, clients,
consumers, taxpayers, patients, and so forth. TQM’s concept of internal customers is a powerful one. These are fellow employees within the organization-those in the next office or other department-who benefit from or rely upon one unit’s work to perform their own. According to TQM, all organizations are systems of interdependent work processes, with each unit performing certain work on the product or service and then passing it along to the next unit or to the external customer. Libraries are certainly no exception. For example, reference personnel are the internal customers of the cataloging department; they depend upon the quality of the catalogers’ work and of the bibliographic database to successfully perform their work of assisting users.

1.5 Pillars of TQM

The pillars of TQM in any organization are:

- Organizational vision.
- Customer focus.
- Management by fact.
- Total involvement.
- Continuous improvement.
- Systematic support.

1.6 Fundamentals of TQM Philosophy

The fundamentals of TQM philosophy dates back to the “penny idea” of 1913. The seven tenets on which the idea was built are:

- To serve the public as nearly as we can to its complete satisfaction.
• To expect for the service we render a fair remuneration and all profit the traffic will bear.

• To do all in our power to pack the customer dollar full of value quality and satisfaction.

• To continue to train associates and ourselves so that the services we give will be more intelligently performed.

• To improve constantly the human factor in our business.

• To reward men and women in our organization through participation in what the business produces (job satisfaction).

• To test our every policy, method and act in this way “does it square with what just and right”.

1.7 Essentials of TQM

The following are the essentials of TQM:

• A quality policy and importance of management commitment.

• The involvement, commitment and responsibility of everybody (total employee involvement).

• Quality in all processes (team work and positive culture).

• Quality as a strategy.

• Focus on prevention rather than inspection.

• Quality by design- standardization.

• Continuous improvement.

• Zero defects.

• Customers and supplier integration, customer satisfaction.

• Quality audit and review.

• Benchmarking.
1.8 Continuous Improvement Through Measurement

Quality that is not measured is a slogan, not a system.-anonymous
the element of continuous improvement is rooted in Deming’s approach to
variation and process control. He believed that since most industrial problems
and waste were the result of systems or process failure, the way to reduce
waste and improve the system was through identifying faults or possible
variation in the work process inputs, function, and outputs.

Whether in industrial or non industrial settings, quality goals are most
often stated in quantitative terms. Quality improvement goals are defined in
terms of performance measures, and success is achieved through knowing
where the organization stands on key quality indicators and then raising
performance up to a higher level. Knowing what to measure is critical, and
directing measurement efforts toward activities that are important to
customers provide customer satisfaction, or help to eliminate waste is vital.
Since statistical variations may be of two kinds- significant or insignificant-
being able to both differentiate between the two and concentrate on those that
are significant is important.

For example, a library might establish a goal of “improving patron success
in obtaining the materials he or she needs,” but in order to realize that goal or
measure progress toward it, the library needs to have a statistical baseline
that indicates what percentage of patrons or transactions are not successful.
Then the library can proceed to identify the reasons for this (e.g., material not
owned, not on the shelf, or patron can’t use a catalogue) and establish the
rate of improvement it hopes to accomplish (e.g., improve success from 78%
to 88% in one year). Thus, there are four steps in measuring quality improvement.

1. Identify the right things to measure (i.e., key indicators of customer satisfaction).
2. Establish a baseline (i.e., the situation for each quality indicator when you begin).
3. Identify the targets you are going to attempt to reach.
4. Decide how to measure (what will be measured? How will it be measured? Who will measure? How will the results be reported? What will be done to follow up?).

1.9 Teams

Substantive employee participation, a cornerstone of TQM, is achieved through both principle and practice. Employees’ ideas are respected and their contributions are encouraged on the simple principle that those who do the work know it best. The organizational vehicle of employee participation and empowerment is the team.

Teams can be broadly defined as “a group of people pooling their skills, talents and knowledge, “but there can be many variations. Under this rubric, depending on the purpose, role, makeup, and authority or autonomy level of teams. One useful diction is between “self-managing work team” and “problem-solving teams.”

A self-management or self-directed work team usually connotes a group of individuals associated together for a “whole” work process or
segment that delivers a product or service to an internal or external customer in this context, employees work together to plan, control, and perform their daily work.

By contrast, “product-solving teams” are brought together for a special purpose, such as to address a specific problem or design a new product or service. Quality improvement teams are often of this type; they are formed to identify, measure, analyze, and correct, or propose and test solutions to a given situation or process that falls short of quality standards or customer expectations. In TQM, individuals on these teams have defined roles, including team facilitator, and team member, and the teams follow a structured problem-solving process using whatever analytical (problem-solving) tools are appropriate to their task. Before beginning their work, team members are usually trained in team processes and application of the tools.

1.10 TQM in Library and Information Centers

The practice of Quality Management in Library and 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 rations; 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.

In early 1980s, numerous studies were made on automated data validation, error rates and patterns, authority control which belong to quality
control in online databases. However, customer and employee satisfaction are seldom in focus. Quality assurance studies were mostly restricted to special libraries and academic libraries. Although quality assurance studies based on ISO 9000 and other accreditation schemes were conducted in libraries in UK, USA and Canada, such studies are rarely reported in Indian libraries and information systems. The quality assurance initiative in LIS has primarily came from the parent organization to which it provides services. However, in the later years, the quality assurance system has become as essential feature of LIS management. 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.

1.11 Objectives of TQM

Approach to ‘Total Quality’ management is based on the quality philosophies of Deming, Juran and Crosby. There could be some differences in approach from organization to organization, but they have some basic elements embedded in them. These basic elements are customer focus, strategic planning, enlightened leadership, continuous improvement, empowerment of people and teamwork. Principles of total quality management are concerned with the process of establishing these elements in the organization, with the spirit of those key elements permeating all processes. Thus, total quality philosophies effectively redefine management systems and processes, and evolve a new objective for an organization-
‘performance excellence’-leading to superior business results. A brief discussion of objective of total quality management prior to discussing the approach and principles will be helpful.

It may appear from previous discussions that the objective of TQM is customer satisfaction, but that is only one of the aims of the TQM process. The Objective is a strategic goal, set by the organization through its strategic planning process for the attainment of vision in the larger frame of the future. In this respect, the primary objective of TQM can be simply stated as to ensure ‘performance superiority’ of the company over competitors by delivering total customer satisfaction. However, this objective of TQM in an organization cannot be achieved without planning a set of key processes, each having their own objectives and their synergistic effect finally adds up to the company’s overall objective of superior business results. The key business process categories of Malcolm Baldrige Quality Award modal with the objectives of:

- Making the organization market and customer focused.
- Guiding the organization by its values, vision, mission and goals set through ‘strategic planning’ process.
- Changing the organization from ‘function’ focused to ‘customer’ focused, where customers' priorities come first in all activities.
- Making the organization flexible and learning oriented to cope with change; change in the market place, business-environment, opportunities for improvements as well as organizational culture.
• Making the organization believe in – and seek- continuous improvement as a new way of life.

• Creating an organization where people are at the core of every activity, and are encouraged and empowered to work in teams.

• Promoting a transparent leadership process to lead the organization to excellence in its chosen field of business.

These are a few important objectives, achievable by suitably designing TQM processes. However, these are broad-based objectives and not a set of specific goals and objectives in the conventional sense where they are set with specific targets. For specific targets, goals and objectives, have to be specific, measurable, attainable, realistic and time-bound, (neatly condensed in an acronym: smart). Therefore, when the organization aims for certain specific goals and objectives, they are set in each of the aforementioned areas in a quantifiable manner. To illustrate a few examples of such objectives, an organization can take following specific targets in some of the process areas. Examples are:

• Introduction of ‘internal customer’ system in 100% of processes and activities in the operations and marketing areas.

• All employees to be provided with 30 hours of training per year in statistical and quality improvement techniques.

• At least 15 ‘cross-functional’ and empowered teams to be made functional by the end of the first year of TQM, in areas of restructuring customer-focused horizontal processes.
• Senior leadership to plan and execute at least three customer visits per month.

These goals and objectives are more specific as to what should be achieved towards a company’s journey towards total quality, but with a short-range target. They fulfill the condition of SMART as mentioned earlier. These specific objectives are often a part of annual plans and targets of a company.

1.12 Scope and Approach of Total Quality Management

Before discussing the principles of total quality management, it is necessary to understand what Total Quality Management (TQM) is, and about its approach. Like any other management process, TQM is also based on certain philosophical postulates originating in the prescriptions of Deming, Juran and Crosby. Various recommendations made by these pioneering philosophers from the bedrock of total quality management principles. Nevertheless, industries and business-along with their business contexts-are constantly changing, as a result of which the approaches and processes of TQM have also undergone some modifications, not so necessary to define what TQM stands for, in the present context of global competition, before embarking upon a discussion of TQM principles.

In the context of a business comprised of a number of complex functions, TQM can be described as a strategic process of seamlessly integrating all functions, activities and processes of an organization for continuous improvement of the quality of goods and services. The aim of this strategic process is customer satisfaction and the outcome is excellence in
performance. Strategically, TQM business results by changing the focus of all activities in the company to the customer.

To change the focus of all activities to customers and customer needs, the TQM system presumes that:

1. The Entire business process of a company is an unending “chain” for delivery of continuously improved products and services to the total satisfaction of its customers, and

2. Individuals or groups within the company who are performing an activity or activities concerning those products or services are “links” in that chain.

More specifically, this means that each link in the chain that delivers products or services ‘receives and provides’ some service or subset of the product from the preceding or succeeding links. Thus, each link has one or more ‘supplier and customer’ in the chain, and quality has to be maintained at each of these points in order to satisfy their respective needs.

This dedicated participation is crucial for the success of a company’s business and superior performance, and this methodology simultaneously enables the company to transform the TQM process to ‘people driven’ system as well. TQM place people at the core of any system, driving it from within. TQM philosophy believes in people’s ability, and holds that ‘give people an opportunity to succeed: they will; give people clear goals: they will meet them’.

This, TQM is a process of promoting the integration of customers, people and the process of the organization aimed at the common goals of
'customer satisfaction'. TQM systems bind people in the organization together by involvement and commitment towards this common goal. TQM is, thus, a people driven customer focused strategy, which is designed to lead to all-round ‘performance excellence’ of the organization by integrating people, processes and resources together for achieving total customer satisfaction.

1.13 Key Activity Areas of TQM

Key activities mean those which ought to be emphasized and carried out in an organization for achieving the end result i.e. performance excellence under the TQM system. TQM system by its very nature concentrates on maximizing the efficiency and effectiveness of internal resources to build up organizational capabilities superior to the competition. Therefore, key activities under TQM revolved around promoting performance excellence in the organization by continuous improvement of its capability. These key activity areas are:

- Promotion of customer orientation in all activities.
- Propagation and communication of values and vision throughout the organization and to its people.
- Setting up of business strategy and strategic planning process for turning vision into actions.
- Restructuring the existing process to customer focused processes and provide market orientation.
- Promoting and seeking continuous improvement of processes and activities.
- Providing training and development to people.
• Empowering people for faster decisions, and promoting teamwork.
• Building up information gathering and analysis system throughout the organization for based management.

TQM is a customer focused, people driven process in an organization for attaining the company’s stated vision, mission and goals set by the Leadership. It is, therefore, a critical process requirement in TQM system that the vision, mission and goals are clearly communicated to all employees by the leadership, to bind them together in committed action. Visions are to be actualized by plans and actions, which is the focus of strategic planning. Empowering people is the key to getting best out of every individual, so essential for superior performance of the organization. Hence, TQM demands a strong human resource management process. Information and analysis of data and performance are means for reviewing the gap between plan and achievement. This is vital for identifying areas for improvement on the path of continuous improvement. Thus, system of information gathering and analysis must be placed in position throughout the organization.

1.14 Impact of Ranganathan’s Five Laws in Quality Service

The five laws of Ranganathan help in quality improvement of service as those are concentrated to the users very seriously. The laws directly advocate towards libraries’ collection development, speedy processing, maintenance and quick retrieval of information by users.
The First Law “Books are for Use” is a direction for measuring the quality of a library; quality in terms of contents, accessibility and availability as and when needed.

The Second Law “Every reader his/ her books” implies needs of library users. In order to meet this law the library has to index all micro and macro documents so that every reader can find out his or her requirements.

The Third Law “Every Book / Information its reader” implies the importance of book/ information selection in a library. The law advocates scientific document selection, subject based organization, advanced and in depth indexing, efficient and effective searching and locating tools, Staff assistance, open access, extension activities, publicity programs etc.

The Fourth Law “Save the time of Reader” indicates the importance of fast and efficient services to the users with the advanced technologies, method, techniques and tools. Open access, electronic/Online services, classified arrangement of documents in shelves, location and directing guides, excellent searching tools, and techniques i.e. Online Public Access Catalogue (OPAC) in an automated library, Xerox facility, Online Information services, qualified and experienced staff will ensure fast service to the users.

The Fifth Law “The Library is a growing organism” implies collection development, recruitment of library professionals and extending the library services and changing of all components of a library.
1.15 Objectives of the Study

The main objectives of the study are:

- To study the demographic characteristics of Library users and Library professionals of university libraries in Tamil nadu.
- To identify the level of execution of TQM among the library professionals.
- To study the criterion for quality assurance in providing quality information services.
- To study the user’s needs and expectations in the University Libraries.
- To study the experiences of Tamil Nadu Government State Universities in providing quality information.
- To study the users’ views regarding the sources and services of the university libraries.
- To study the behaviour of the library professionals regarding the rendering of information services to the library users.
- To study the job satisfaction among the library professionals in university libraries.

1.16 Plan of Chapters

Chapter I provides an introduction to the study, definition of concepts and objectives of the study.

Chapter II deals with the Review of Related Literature on Total Quality Management, Job satisfaction of Library professionals and Availability/Accessibility of Information Sources and Services.
Chapter III presents the Research Methodology highlighting the research design, significance of the study, scope of the study, hypotheses, sampling technique, tool used for collecting data, Statistical tools used for analysis, period of study, limitations of the study, Bibliography rendering style and Profile of university libraries.

Chapter IV deals with the interpretation along with suitable statistical applications and geographical representations.

Chapter V presents the summary of findings, suggestions and conclusion.

REFERENCES


