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# UNIT 2 TOTAL QUALITY MANAGEMENT

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## 2.0 OBJECTIVES

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After reading this Unit, you will be able to:

- explain the concept of quality and total quality management (TQM);
- discuss the organisation's need for quality;
- identify the process of TQM;
- describe how TQM is applied in library and information centres; and
- highlight the requirements and problems of implementing TQM in libraries.

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## 2.1 INTRODUCTION

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A new approach of management which is known as Total Quality Management (TQM) was originated in 1950's in Japan and later became popular in the whole world. The approach is basically related with satisfying customer needs that further leads to quality in all processes of the organisation. TQM is basically for the customer focused organisations and for those involving all employees for producing quality products and rendering quality services. TQM is a structured system of continuous improvement, employing participative management technique and centered around the needs of the customers. It is a way of managing, to improve the effectiveness, flexibility and competitiveness of an organisation as a whole. TQM is also called the method of removing waste by involving each and every one and improving the way things are done. In this way TQM is the art of managing the whole organisation to achieve excellence.

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## 2.2 QUALITY

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Quality is a measure of the achievement of an organisation in terms of customer satisfaction. It means everything that an organisation does, in the eyes of the customers. It is the excellence that is better than a minimum standard. Some of the important definitions of the concept quality are given below for your understanding:

**Joseph M Juran** said “Quality is fitness for use or purpose”.

**ISO 9000:2000** defines “Quality is the degree to which a set of inherent characteristics fulfills requirements”.

**Bill Conway** defines quality as “Development, manufacture, administration and distribution of consistently low cost and products and services that customers need and want”.

**W. Edwards Deming** defines it as “A predictable degree of uniformity and dependability at low cost and suited to market”.

According to **Sarkar**, “Quality of a product or service is the ability of the product or service to meet the customers’ requirements”.

Based on the above definitions it becomes clear that quality is a multidimensional concept that relates human needs to human actions as well as to organisational goals. It is not a static process or concept but as a dynamic process it changes according to changes in the needs of the customers. Hence the quality is deeply user-oriented.

### 2.2.1 Why do We Need Quality?

Any organisation needs quality for:

- Customer satisfaction and happiness
- Goodwill (image of the organisation) and high productivity
- Capturing the market
- Minimising the cost as well as losses
- Maximising the profit
- Recognising the role of everyone in the organisation
- Fixing a common goal for the entire organisation
- Emphasising teamwork among the staff
- Establishing performance measures for the employees
- Betterment of employees
- Increased viability.

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## 2.3 TOTAL QUALITY MANAGEMENT

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TQM is a philosophy and not a technique. It is based on three basic concepts: quality control, employee participation and customer satisfaction. “TQM is a management approach for an organisation, 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 organisation and to society.” In TQM customer satisfaction, is the organisation’s foremost priority because success of the organisation depends upon the customer satisfaction. TQM can be elaborately defined as:

- **Total:** It means everyone in the organisation is responsible for Quality irrespective of their position and functions. In this way it takes systems view (total view) which is exhaustive and rigorous.
- **Quality:** Meeting customer’s needs at the lowest cost, first time and every time. Produce and serve according to customer needs.
- **Management:** Continuous improvement by an interactive network of communication and control. Commitment of top managers and optimum utilisation of resources.

In this way TQM is the art of managing the whole to achieve excellence. It is based on:

- **One objective:** Continuous improvement
- **Three principles:** Customer focus, Process improvement, Total involvement
- **Six Elements:** Leadership, Education and Training, Communication, Supportive structure, Measurement, Reward and Recognition.

### 2.3.1 Principal Objectives

- Continuous improvement
- Customer focus
- Continuous and relentless cost reduction and quality improvement
- Total participation
- Prevention and zero defects

Continuous improvement is the heart of TQM as it links product quality and customer satisfaction. This leads to measuring and monitoring all activities of the process cycle so best products can be obtained. The theory of prevention rather than detection is followed in this context. The customer-driven approach helps to prevent errors. For successful implementation of TQM, committed and well trained work force is required. Participation of employees is reinforced by award, reward and recognition system. The education and training of employees is also very essential for the quality. This involves the continuous improvement of organisational processes, resulting in high quality products and services. Good quality leads to more productivity and results in:

- Increased sales
- Profit
- Minimum losses
- Error reduction
- Reducing customer complaints

In a manufacturing concern, the customer is remote, where as in service organisation like a library, producers and consumer meet face to face. Managing service organisations is more complex. TQM is a way of life for such organisations.

Deming is credited with providing the foundation of the Japanese quality miracle. He developed the following 14 points for managing the improvement of quality, productivity, and competitive position:

- 1) Create constancy of purpose for improving products and services
- 2) Adopt the new philosophy
- 3) Cease dependence on inspection to achieve quality
- 4) End the practice of awarding business on price alone; instead, minimise total cost by working with a single supplier
- 5) Improve constantly and forever every process for planning, production, and service
- 6) Institute training on the job
- 7) Adopt and institute leadership
- 8) Drive out fear
- 9) Break down barriers between staff areas
- 10) Eliminate slogans, exhortations, and targets for the workforce
- 11) Eliminate numerical quotas for the workforce and numerical goals for management
- 12) Remove barriers that rob people of pride in their work, and eliminate the annual rating or merit system
- 13) Institute a vigorous program of education and self-improvement for everyone
- 14) Put everybody in the company to work to accomplish the transformation

Based on the above discussion it is pertinent to say that the three main components of TQM are:

- Planning;
- Review; and
- Performance tracking.

### **2.3.2 Gurus of TQM**

Many experts have given theories of TQM. These experts are known as Guru's of TQM. The main among them are:

- Walter. A. Shewhart – TQC &PDSA
- W. Edwards Deming – 14 Points, SPC (Statistical Process Control) & PDCA (Plan, Do, Check and Act)
- Joseph. M. Juran-Juran's – Trilogy (Quality Planning, Quality Control and Quality Improvement)

- Armand.V. Feigenbaum – Customer requirement, CWQC, Employee Involvement, TQC (Total Quality Control).
- Kaoru Ishikawa-Disciple of Juran & Feigenbaum. Introduced Quality Control Circles (QCCs), also introduced seven tools for quality control purposes they are: Histograms, Check sheets, Pareto diagrams, Control charts, Scatter diagram, Flow charts and Cause &Effect Diagram (also known as Fishbone or Ishikawa diagram).
- Philips.B.Crosby – Four Absolutes-Quality-Requirements, Prevention of NC, Zero Defects & Measure of NC, 14 steps to implement quality programs.
- Shigeo Shingo- Zero defect.
- Taguchi.G-Loss Function, Orthogonal Arrays and Linear Graphs, Robustness.

The details about these gurus of TQM and their theories are part of MLIS syllabus, we are not discussing them here in detail.

**Self Check Exercises**

**Note:** i) Write your answers in the space given below.

ii) Check your answers with the answers given at the end of this Unit.

1) Define quality and explain why do we need quality?

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2) What are the principle objectives of TQM?

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3) Name the main Gurus related with the concept of TQM

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### 2.3.3 Quality Circles

The quality circle was first developed in Japan, during 1960s and later it became popular elsewhere. The concept is based on the recognition of the value of the employees.

- The concept of Quality Circle is central to TQM and it ensures staff participation in full measure towards achieving the targeted goals of the organisation
- A Quality circle is a small group of people which meets regularly for solving problems
- They are helpful in developing team spirit in the organisation as well as well as lead to improved organisational culture
- These circles improve communication within the organisation and also act as motivation to employees of the organisation
- They are the best examples of participative management in organisations. They promote job involvement of employees
- They are helpful in bringing leadership qualities in the employees
- It can also be used as a human resource development technique.

#### ISO 9000

- It is tool for improvement and improves professional image of the organisation where it is implemented
- The ISO series comprise 9000, 9001, 9002, 9003 and 9004
- The ISO series does not lay down the goals and objectives; it rather provides a framework, methods and structure for organisations to adopt quality systems. It is applicable to any type of organisation

We can say that training and teamwork is very important for TQM. Commitment and personal involvement of the top managers is very essential for the successful implementation of TQM. It is the management process for improving all the functions in the organisation. It supports meeting customer requirements through continuous improvement. Customer satisfaction is given the highest priority in TQM. Internal monitoring is very essential for TQM implementation.

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## 2.4 IMPLEMENTING TQM IN LIBRARIES AND INFORMATION CENTRES

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Quality management is used for a long time in industries but the service institutions like libraries have more recently started applying TQM to provide quality services to the users. As we have discussed in the previous section of this Unit that TQM is focused on the requirements of the customer. Library is a service oriented organisation with major goal to serve the customers. A library patron or user as a customer demands a service and expects that library should provide that service. The prime objective of the library is to provide information, services and products to the users. TQM offers an approach for libraries to design processes, policies and jobs so that they are the best and most effective methods for serving users' needs by eliminating inefficiencies and assuring quality service.

Librarians must find out what readers want and concentrate upon providing it. Designing an appropriate service means asking:

- Who are the customers?
- What do they want?
- What can the library provide and need to do to meet the user's expectations?
- How libraries know about their performance?
- What needs to be changed or continued according to performance of the service or product of the library?
- How do library communicate with the users?
- To what extent, library knows the current and potential needs of the users?

TQM is seen as a commitment to service with a flexible and future-oriented approach to management. It links the services and products with user demands. The importance of TQM for libraries is not just limited to know about users needs but also to assess her/his need in anticipation. However while applying TQM one has to remember that it does not provide a quick solution and TQM needs integrated efforts for improving the quality of the services.

A good understanding of applying appropriate quality management concepts and techniques is essential for effectively implementing TQM in libraries. In the context of libraries, customer satisfaction means fulfilling expectations of users.

In libraries, users generally judge quality in relation to:

- Collection
- Services
- Products
- Skills and behaviour of Staff
- Infrastructure
- Display of information about the facilities provided by the library
- Proper communication facilities to the users
- Complaint and suggestion system for the users.

Generally any user of the library judges the quality of the library by keeping in view the following points:

- accuracy of the services;
- adequacy of the need-based services;
- timeliness of the services
- exactness of the information provided
- cost of the service
- professionally trained and committed staff
- attitude of the staff towards users.

User-based approach is based on the idea that quality lies in the eyes of the beholder and that the customer (or user) is the ultimate judge of quality. Yet, it is not very easy to apply TQM in libraries because of wide range of user needs and ever increasing demands.

Implementing TQM in libraries is not just changing certain procedures but to have a total rethinking. Change in whole culture is needed to make libraries completely quality-driven and customer-oriented. For this purpose not only words but actions and teamwork are essential. The role of library staff is also very crucial in this regard. To implement TQM in libraries, a long-term plan with clear objectives and vision is needed. It is considered fruitful only if we make library work more with achievement-orientation. In libraries we measure performance of products and services not only quantitatively but qualitatively also.

### **2.4.1 How to Use the Principles of TQM in Libraries**

We know that product quality is the result of process quality and the quality products lead to customer satisfaction. Rapidly responding to customer requirements is very necessary for the library staff for providing them their desired products and services in time. Measuring and monitoring the whole process are also essential in TQM implementation.

“Sirkin” suggests some ways a library might use the principles of TQM to enhance library services.

- Create service brochures and information kits.
- Conduct a user survey about library services.
- Improve signage.
- Change hours of operation.
- Provide a more convenient material return.
- Simplify checkout of material.
- Use flexibility in staff assignment.
- Co-operate with local government.
- Ask vendors to give products demonstration.
- Give new staff a through orientation.
- Create inter departmental library advisory groups.
- Improve the physical layout of the library.
- Track complaints.
- Develop an active outreach programme.
- Open satellite offices.
- Publicise new services or changes in services.
- Develop user and staff training materials.
- Target services to specific groups.
- Offer electronic document delivery.
- Follow the mission statement.

Several methods, tools and techniques are used to measure the dimensions of quality of services that are utilised by a user in the process of evaluating library services (Dash, 2008).



- Performance – Performance of library services according to the user’s need.
- Features - Special features of library those appeals to users.
- Access – Approachability to library and easy access to document.
- Competence – Possession of special skills and knowledge required for performing the library services in the changing context.
- Responsiveness – Whole-hearted endeavour to provide services as soon as possible.
- Courtesy – Respect, politeness and tidy appearance of library staff.
- Communication – Listening carefully to the users, educating and informing them in the language in which they can understand easily.
- Reliability – Providing reliable information thus making users free from doubt and confusion.
- Credibility – Trust worthiness, belief that staff is having the user’s best interest at heart.
- Tangibles – The physical evidence of various services, tools, equipments, and latest information technologies.

For effectively implementing TQM in libraries quality will have to be introduced at design stage of product and service keeping in view the theory of prevention rather than later detection and rectification. For this purpose short product introduction cycles needs to be introduced so that the product will reach to the customer in time.

The following figure shows that how TQM is being implemented in libraries and information centres:

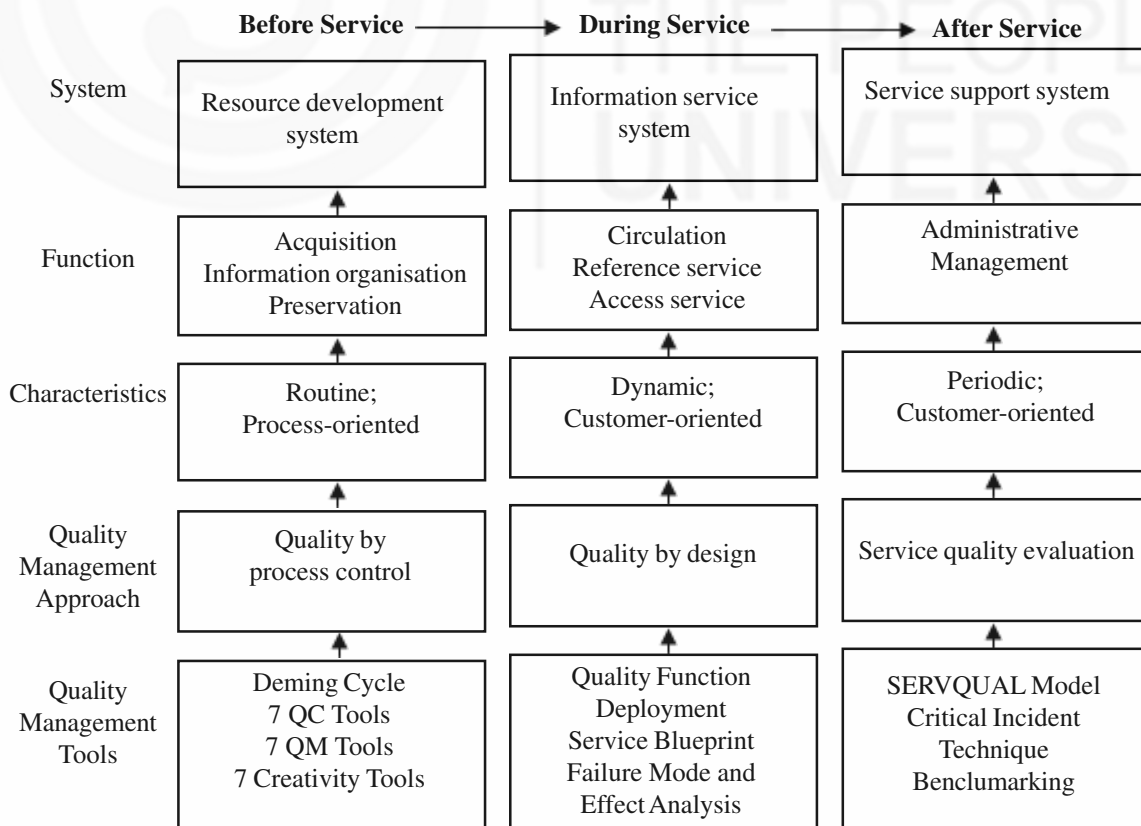


Fig. 2.1: Quality Management Approaches in Libraries and Information Services

Source: <http://www.librijournal.org/pdf/200-3pp191-201.pdf>

The expectations with which a customer comes to a library have a critical effect upon her/his perceptions of quality. It is better to acquire a reputation for one or two factors which are important to customers and to concentrate upon developing them. Service delivery is like a theatrical performance. It is also important to find out which services can be automated without losing the personal touch.

The circulation desk staff is the front line staff that play a critical role in a library because they represent the library; they are the first to deal with inquiries/crises; manage the reader interface. Similarly Reference staff is also very helpful in building the image of the library among the users so public services staff must be carefully-appointed and must be given periodic training to keep up-to-date.

### Self Check Exercise

**Note:** i) Write your answer in the space given below.

ii) Check your answer with the answers given at the end of this Unit.

4) Explain how to implement TQM in libraries and information centres?

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### 2.4.2 Requirements for Implementing TQM in Libraries

Effective implementation of TQM in libraries presupposes certain requirements. They are:

**Proper Infrastructure:** Support systems should reflect customers' priorities. Lack of infrastructure is a common problem in libraries. It is important that management must ensure appropriate infrastructure that are required for providing quality services are provided to libraries.

**User education:** Making users aware of processes, products and services of libraries is an important necessity. If customers are to gain maximum benefit from a service, they must know how to use it. Well-planned user education is a must for implementing TQM in libraries. For this purpose, libraries should organise workshops, lectures, seminars and invite users to participate so as to have better communication with them.

**Training of Staff:** In order to enable staff to deal effectively with the changing environment and serve users as required, the staff have to undergo training. All library staff must receive training including on-the-job guidance and training. Well-trained staff is the competitive weapon for better quality service in a library. Constructive role of library staff is very essential in implementing TQM in libraries. It is not enough if a library provides a good product or service to its users. The attitude of the staff matters the most. If staff is not helpful to the users, it becomes a major hindrance in providing total quality to the customer.

**User Studies:** To know about the feedback of users regular/ periodic user studies are required. Getting feedback from the users is important to ascertain the quality

of service. Regular users of a library can be given a questionnaire to get feedback from them for improving service. User satisfaction surveys will also give good feedback to make service more effective and such services create positive impact on the customers. These are the ways to find out loop holes in the system. This will help not only in improving the existing services but also introducing new services according to the needs of the users. It is not enough to collect user feedback, but proper analysis of the data should also be carried out to have the clear picture.

### 2.4.3 Problems in Implementing TQM in Libraries

Some major hindrances in implementing TQM in libraries are:

- Paucity of funds
- Lack of adequate infrastructure
- Lack of support from top management
- Rigid organisational culture and structure
- Employees resistance to change
- Improper and irregular training and education of the library staff
- Improper planning as well as lack of long-term planning
- Lack of coordination among staff and management and also at various level in the library
- Not applying marketing approach in libraries
- Not conducting proper market research (user research) to know about user requirements.

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## 2.5 SUMMARY

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In this Unit, we have discussed the concept of quality, total quality management, quality circle and ISO series of standards on service quality. TQM essentially focuses on meeting customers' needs by providing quality services and in this processes role of everyone in the organisation is recognised and emphasis is laid on the teamwork. This effective involvement and utilisation of the entire workforce take place to establish performance measure for the processes. We have noted how TQM approach can be implemented in libraries and information centres and how the needs of the users are to be kept in view to know their quality expectations. As service-oriented organisations, libraries know that a satisfied customer visit library again and again. Therefore, quality management system should be built in all the operations of the libraries in order to integrate quality in all facets of library working. This way it is a systematic process of continuous improvement. The philosophy of TQM is that any organisation is successful if its customers are satisfied.

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## 2.6 ANSWERS TO SELF CHECK EXERCISES

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- 1) Generally by quality we mean the measure by which any organisation knows about its customer satisfaction. We need quality because of the following reasons:
  - Customer satisfaction and happiness

- Goodwill (image of the organisation) and high productivity
  - Capturing the market
  - Minimising the cost as well as losses
  - Gaining the profit
  - Recognising the role of everyone in the organisation
  - Fixing a common goal for all the organisation
  - Emphasising teamwork among the staff
  - Establishing performance measures for the employees
  - Betterment of employees
  - Increased viability.
- 2) The main objectives of TQM are:
- Continuous Improvement
  - Customer focus
  - Continuous and Relentless Cost Reduction and Quality Improvement
  - Total participation
  - Prevention and Zero defects.
- 3) The following are the main Gurus of TQM:
- Walter.A.Shewhart
  - W.Edwards Deming
  - Joseph.M.Juran-Juran's
  - Armand.V.Feiganbaum
  - Kaoru Ishikawa
  - Philips.B.Crosby
  - Taguchi.G
- 4) Implementing TQM in libraries is not just changing certain procedures but a total rethinking is needed. A change in whole culture is needed to make libraries completely quality driven and customer oriented. For this not only words but actions and teamwork is essential. Role of library staff is very crucial in this context. For implementing TQM in libraries long-term planning with clear objectives and vision is needed. It is fruitful if we make library work more achievement oriented.

“Sirkin” suggests some ways a library might use the principles of TQM to enhance library services.

- Create service brochures and information kits.
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- Ask vendors to give products demonstration.
- Give new staff a through orientation.
- Create inter departmental library advisory groups.
- Improve the physical layout of the library.
- Track complaints.
- Develop an active outreach programme.
- Open satellite offices.
- Publicize new or changes services.
- Develop user and staff training materials
- Target services o specific groups.
- Offer electronic document delivery.
- Follow the mission statement.

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## 2.7 KEYWORDS

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- Quality** : In simple terms quality mean degree of excellence.
- Quality Control** : The set of procedures used to achieve quality is known as quality control.
- Quality Circles** : It is a small group of people meeting regularly to solve the problem.
- Total Quality Management** : It is a continuous process to ensure maximum customer satisfaction and delivering quality products and services to the customers.

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