

## Total quality management

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### Abstract

The past decade has seen many firms focusing on total quality management (TQM) as a means of improving profits, market share, and competitiveness. In this paper, an attempt is made to review the status of literature on TQM. After a short overview of theoretical literature of total quality management, here we discussed about Total Quality Management, steps in implementing TQM, principle involved in these systems and the importance of implementing these modern systems in Pharmaceutical industry.

**Keywords:** Quality, Total Quality Management, Continuous quality improvement

### 1. Introduction

Total Quality Management is an organization approach that began in the 1950s<sup>[1]</sup> and has consistently turned out to be better known following the mid 1980s. Generally the term 'Quality' is connected with customer satisfaction. Customers want the best return for the money they pay to buy something. Customers would examine products to see if they met their standards prior to purchasing those<sup>[2]</sup>. Therefore enterprises and associations attempt to ensure that the items launched or marketed by them should be well prepared to fulfill the buyers' need. Total quality management is a depiction of the way of life, attitude and organization of a company that endeavors to provide customers with items and services that fulfill their requirements. The culture requires quality in all parts of the organization's operations, with procedures being done right the first time and defects and waste eradicated from operations. According to International Organization for Standardization (ISO) "TQM is a management approach for 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 to society." It is a method by which management and employees can become involved in the continuous improvement of the production of goods and services. Another definition includes: It has been defined as an integrated organizational effort designed to improve quality at every level<sup>[3]</sup>. The process to produce a perfect product by a series of measures requiring an organized effort by the entire company to prevent or eliminate errors at every stage in production is called Total Quality Management<sup>[4]</sup>. Mohrman *et al.*, defined TQM is an approach to managing organisations which emphasizes the continuous improvement of quality and customer satisfaction, entails the application of systematic tools and approaches for managing organizational processes with these ends in mind, and involves the establishment of structures such as quality improvement teams and councils for maintaining focus on these ends and enacting organisational improvement processes<sup>[5]</sup>. Basically, Total Quality Management is sum up of three words which are shown in figure 1.

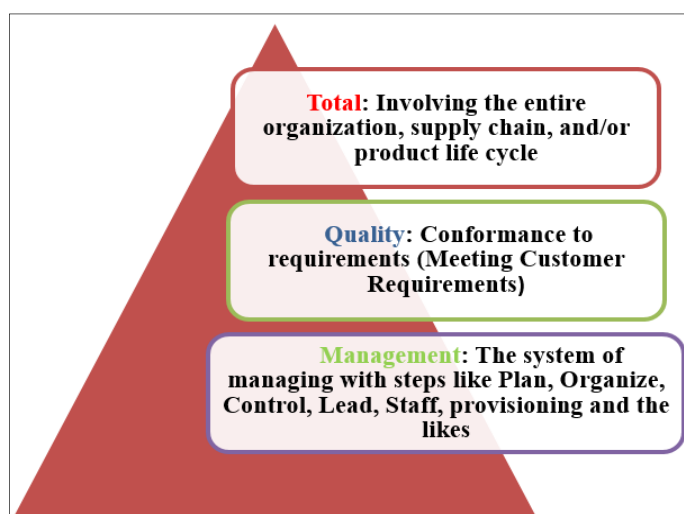


Fig 1: Total Quality Management

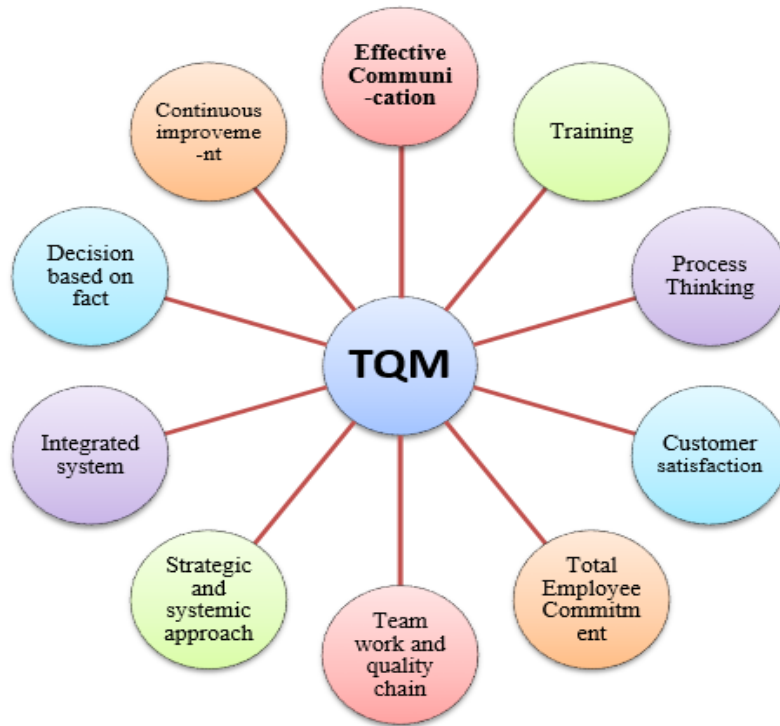
There are various developmental strands, with various areas making their own particular variants from the common

ancestor. TQM is the foundation for activities which are given in the table 1.

**Table: 1** TQM is foundation for various activities

S. No.	Activities
1	Commitment by senior management and all workers
2	Meeting customer necessities
3	Decreasing improvement process durations
4	Decreasing item and service cost
5	Frameworks to encourage change
6	Employee association and strengthening
7	Testing measured objectives and benchmarking
8	Concentrate on procedures/improvement plans
9	Particular consolidation in key arranging

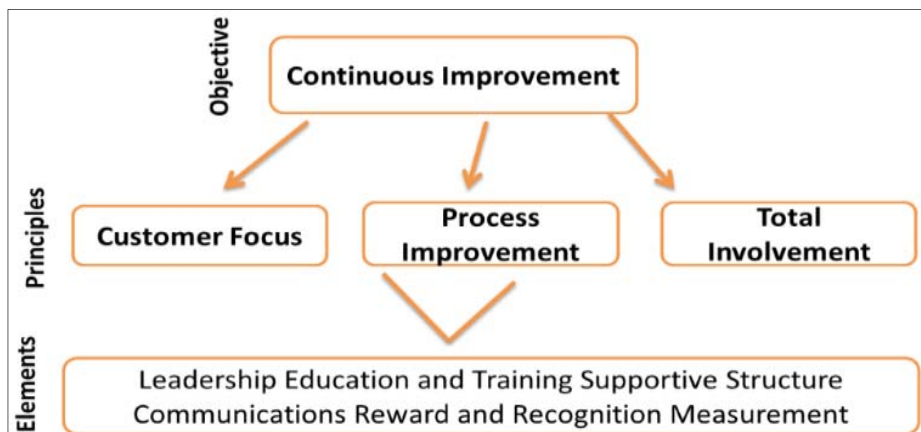
The proposed beam framework is defined in the figure 2 which is shown below:



**Fig 2:** Proposed beam former of TQM

Finally the Total Quality Management is designed to create a comprehensive and all encompassing module which aides in achieving Manufacturing Excellence which is shown by figure 3.

**The TQM system**



**Fig 3**

**2. Steps in implementing TQM:** The various steps which are useful in implementing Total quality management are given below



**3. Principle of TQM**

The main principle of TQM are

**3.1 Management Commitment**

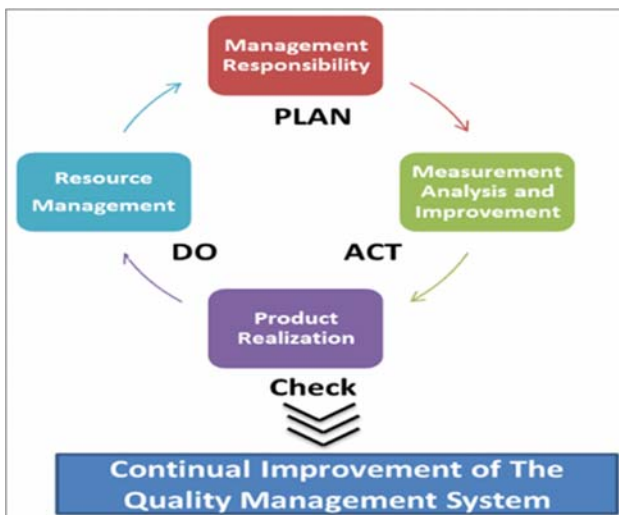
**Plan :** Establish the objectives and processes necessary to deliver precise results, in accordance with the Customer's requirements and the organization's policies.

**Do :** Implement the processes.

**Check :** Monitor and measure processes and products against policies, objectives and requirements for the product to ensure strict adherence to them and detailed reporting of the results.

**Act :** Take action to continuously improve process performance.

This can also be defined with the help of Fig. 4

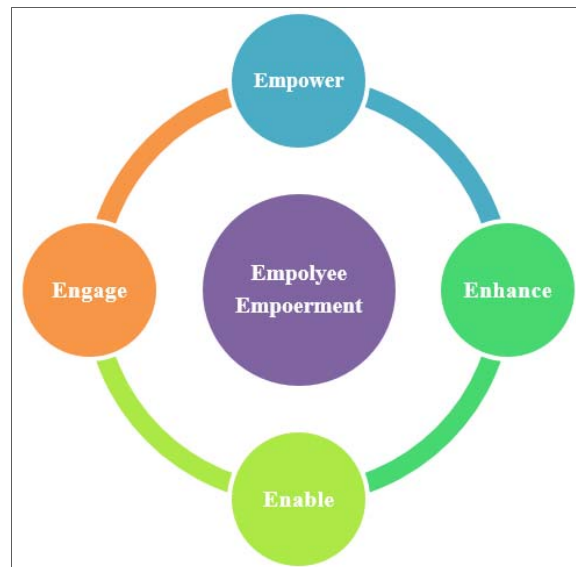


**Fig 4:** Management Commitment

**3.2 Employee Empowerment**

A management practice of sharing information, rewards and power with employees so that they can take initiative and

make decision to solve problems, improve performance and improve service. A circular flow chart representing Employee Empowerment is shown in Fig. 5



**Fig. 5:** Employee Empowerment

**3.3 Fact Based Decision making**

In order to know how well an organisation is performing data on performance measure are necessary. TQM requires that an organization continually collect and analyze data in order to improve decision making accuracy and allow prediction based on past history.

**3.4 Continuous Improvement**

It involves identifying benchmarks of excellent practices and instilling a sense of employee ownership of the process. Figure 6 is representing continuous improvement in TQM.

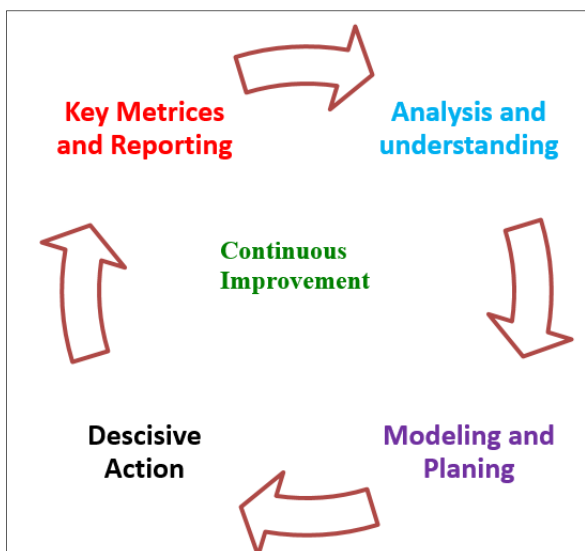


Fig 6: Continuous Improvement

### 3.5 Customer Focus

An organization must define all its process and functions with customer point of view. It includes supplier partnership, service relationship with internal customers, never compromise quality, customer driven standards.

### 4. Total Quality Management and Pharmaceutical industry

The pharmaceutical industries are intensely regulated and the reasons are obvious: mistakes in product design or production can have severe, even deadly, consequences for patients which sometimes leads to recall of the drug from the market; where the truth of the matter is that out of 10,000 NCEs (New Chemical Entities) tried in the lab, one and only reaches to the market and that too takes just about 18-20 years of research and roughly \$800 million. Hence from the above, quality and its management are very critical in this industry. Total Quality Management (TQM) acts as an umbrella under which everyone in the organization can strive for customer satisfaction, reduce cost and wastage and increase the efficiency of services. In the works of Kakkar and Narang (2007) used a questionnaire which has been customized and modified to the specific requirements of the Indian Pharmaceutical Industry. Initially this questionnaire was circulated to select respondents in the Indian pharmaceutical industry as part of the pilot study. The main factors affecting the implementation of Total Quality Management are: Top Management Commitment, Leadership, Quality Management, People Management and Training, Customer Focus and Supplier Quality. The importance of these factors in the context of the Indian Pharmaceutical Industry is given in table 2.

Table 2

Factor affecting TQM	Importance of the Factor in the context of Indian Pharmaceutical Industry
Top Management Commitment	Top management responsibility was observed to be the most significant factor influencing the execution of Total Quality Management. It was observed that the level of duty and involvement shown by the senior management had noticeable effects on the success of the company.
Leadership	An effective and dynamic leader can lead a fruitful group and in this manner make a productive association.
Quality Management	Quality management incorporates accessibility and also utilization of quality information. Convenient and precise information about the manufacturing process is critical to control the procedure and reduce defective products.
People Management and training	Employee training is an essential component of quality management. An organization which fully utilizes the skills of its workers' ability is on its way to accomplish hierarchical goals.
Customer Focus	Customer focus usually includes maintaining an effective customer relations and service program. A customer oriented or customer focused organization maintains its competitive advantage.
Supplier & Vendor Quality	Supplier and seller quality is likewise an imperative measurement of quality management as faulty materials, parts and service lead to item and process quality issues. Keeping up great supplier and merchant relationship is recognized as a key variable in keeping up competitive advantage.

### Conclusion

TQM is a holistic methodology towards the general change of an organisation. The theory of TQM has tended to be fruitful in all fields provided that the management has enough potential to actualize it. As said earlier it improves every process, every employment and every individual inside the organisation. It integrates with the business plan of organization and can positively influence customer satisfaction and market growth share.

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